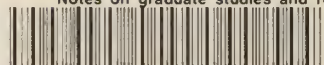





hbl, stx

TX 173.A88

Notes on graduate studies and rese



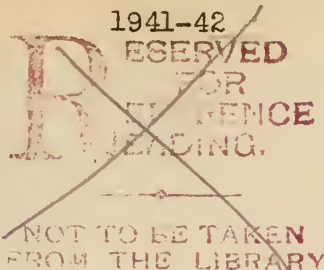
3 9153 00493432 1



Digitized by the Internet Archive
in 2012 with funding from
LYRASIS Members and Sloan Foundation

<http://archive.org/details/notesongrad00asso>

NOTES ON
GRADUATE STUDIES AND RESEARCH IN HOME ECONOMICS
AND HOME ECONOMICS EDUCATION



Compiled under the auspices of

The Home Economics Section
of the
Association of Land Grant Colleges and Universities, Home
= Economics Section
and

The Research Department
of the
American Home Economics Association

June 1942

Issued by

Home Economics Section
Association of Land Grant Colleges and Universities

Mimeographed by

Division of Home Economics
Michigan State College
East Lansing, Mich.

FOREWORD

This is the seventh annual compilation of abstracts of graduate studies and research in the various subject matter fields of home economics and in home economics education prepared under the auspices of the Research Department of the American Home Economics Association.

The distribution of the abstracts in this compilation is indicated in the following table in which, for the purposes of comparison, the corresponding figures for 1940-41 are included:

NUMBER AND DISTRIBUTION OF PROJECTS

Subject	1940-41			1941-42		
	In			In		
	Completed	progress	Total	Completed	progress	Total
	:	:	:	:	:	:
Foods and nutrition	: 120	: 178	: 298	: 113	: 210	: 323
Textiles and clothing	: 43	: 78	: 121	: 57	: 67	: 124
The house	: 11	: 20	: 31	: 13	: 17	: 30
Family economics	: 26	: 29	: 55	: 16	: 27	: 43
The family	:	:	:	:	:	:
Child development	: 18	: 15	: 33	: 14	: 15	: 29
Family relationships	: 1	: 3	: 4	: 8	: 7	: 15
Institutional management	: 9	: 3	: 12	: 3	: 3	: 6
Home economics education	: 91	: 36	: 127	: 89	: 41	: 130
T o t a l	: 319	: 362	: 681	: 313	: 387	: 700

FOREWORD

In the classification and editing of the material for the different sections of the present compilation the assistance of the following specialists is acknowledged with gratitude:

Georgian Adams, Office of Experiment Stations, U.S.D.A.,
Foods - Composition and Nutritive Value.

Isabel T. Noble, University of Minnesota,
Foods - Preparation, Preservation and Quality.

Vera Goddard, Bureau of Home Economics, U. S. D. A.,
Physiology of Nutrition.

Mary Clayton, University of Maine,
Diet in Relation to Health and Disease.

Alpha C. Latzke, and staff, Kansas State College
Textiles and Clothing.

Arnold E. Baragar, University of Nebraska,
The House.

Marianne Muse, Vermont Agricultural Experiment Station,
Family Economics.

Esther McGinnis, Buffalo State Teachers College,
The Family.

Katherine W. Harris, College of Home Economics, Cornell University,
Institutional Management.

Druzilla Kent, University of Tennessee,
Home Economics Education.

Sybil L. Smith, Chairman,
Compiler, 1942
With the assistance of
Georgian Adams,
Office of Experiment Stations,
U.S. Department of Agriculture

CONTENTS

	Page
FOODS.	1
Composition and Nutritive Value	1
General	1
Minerals.	7
Vitamins (general).	14
Vitamin A	17
Thiamin	19
Riboflavin.	23
Nicotinic Acid.	23
Ascorbic acid	23
Preparation.	30
Batters, doughs and cereals	30
Fruits and vegetables	34
Meats.	36
Milk products	37
Eggs.	38
Preservation	39
Canning and jelly making.	39
Frozen storage.	41
Dehydration	44
Quality.	45
Eggs.	45
Fruits and vegetables	46
Meats	51
Fats	54
PHYSIOLOGY OF NUTRITION.	55
Energy Metabolism.	55
Carbohydrate Metabolism.	56
Lipid Metabolism	56
Protein Metabolism	56
Mineral Metabolism	57
Calcium	57
Phosphorus.	58
Iron	58
Copper.	58
Vanadium.	59
Vitamins	59
A and provitamin A.	59
B complex	62
C.	65
D.	67
E	67
Growth.	68
Organic Acids.	69

CONTENTS

	Page
DIET IN RELATION TO HEALTH AND DISEASE.	70
Dietary Studies.	70
Indexes of Nutrition and Nutritional Status.	79
General	79
Anthropometric.	82
Vitamin A	83
Vitamin B ₁	85
Vitamin C ¹	86
Basal Metabolism.	88
Mineral and nitrogen.	90
Blood constituents.	90
Requirements	92
General	92
Vitamin A	92
Vitamin B ₁	92
Vitamin C	93
Minerals.	96
Diseases	97
Anemia.	97
Toxemias.	98
TEXTILES AND CLOTHING	101
Clothing	101
Body measurements	101
Children's clothing	101
Construction and finishing.	101
Costume design.	102
Expenditures.	103
Fashion	103
Hosiery	104
Made-over garments.	105
Selection	106
Serviceability tests and performance during wear.	108
Garments	108
Hose	109
Underwear.	110
Consumer Education	110
Buying guides	110
Fiber and Fabrics.	111
Analysis.	111
Cleaning, laundering and detergents	113
Effect of micro-organisms, and mildew control	116
Finishing treatment	118
Historic textiles	119
Serviceability tests.	120
Blankets	120
Curtain fabrics.	121
Sheetings.	121
Miscellaneous fabrics.	122
Specifications.	128
Testing Methods	129
Miscellaneous	132

CONTENTS

	Page
THE HOUSE	133
Equipment	133
Stoves	133
Food mixers	136
Hand irons	157
Toasters	158
Lamps and lighting	138
House Planning and Arrangement	139
Laundry	141
Miscellaneous	142
FAMILY ECONOMICS	145
Food Buying and the Market	145
Food Consumption; Diets in Relation to Income	147
Clothing Consumption	149
Cost of Medical Care	149
Levels of Family Living	150
Management of Family Finances	151
Consumer Credit	154
Home Management and Related Factors	155
Miscellaneous	157
THE FAMILY	158
Family Relationships	158
Family life and marriage	158
Personality and the family	160
Teaching family relationships	161
Child Development	162
Physical development	162
Teaching and guidance	163
Social and emotional development	167
INSTITUTIONAL MANAGEMENT	172
HOME ECONOMICS EDUCATION	174
Curriculum	174
Needs and Practices	182
Attitudes and Interests	194
Methods	197
Evaluation	201
History and Status	206
Administration	210

FOODS

Composition and Nutritive Value

General

WALL CHART: A GUIDE TO VITAMINS AND MINERALS IN THE FAMILY MEALS. J. T. Chase, under direction of J. E. Richardson, Mont. State Coll. (Professional). Publ. as Mont. Sta. Circ. 165 COMPLETED

This compilation of information about the foods which are good sources of vitamins and minerals was prepared to serve as a convenient guide to the homemaker in planning balanced, nutritious meals. The approximate daily allowances are given, and seven lists show the units of the various nutrients contained in one serving of the foods recognized as good sources. A sample menu for one day, containing the recommended dietary allowances, is included; also a brief summary of the role of vitamins and minerals in the diet.

PROXIMATE COMPOSITION OF FOODS. C. Chatfield, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Chemical Composition of Foods). Reported in Notes on Research No. 6, p.11, 1941. IN PROGRESS

NUTRITIVE VALUE OF HAWAIIAN GROWN VEGETABLES. C. D. Miller, Univ. Hawaii (Professional). (Part of larger project, A Study of the Nutritive Value of Foodstuffs in Hawaii by Means of Chemical Analyses and Biological Experiments. Reported in Notes on Research No. 6, p. 7, 1941. IN PROGRESS

CALCIUM, PHOSPHORUS, and VITAMIN C IN JUICES EXPRESSED FROM RAW VEGETABLES. M. E. Puffer, under direction of E. G. Helliday, Univ. Chicago (Master's Thesis 1941). Publ. in Food Research 7, pp. 140-143, 1942. Reported in Notes on Research No. 6, p. 7, 1941. COMPLETED

It was found that vegetable juices contain from 8 to 69 percent of the reduced ascorbic acid, from 22 to 39 percent of the carotene, from 15 to 90 percent of the calcium, and from 24 to 62 percent of the phosphorus of the whole vegetable. The reduced ascorbic acid content of all of the juices decreased appreciably on standing, but in none of the juices studied was there any loss of carotene. Weight for weight most of the juices were almost as good sources of the nutritional elements as were the whole vegetables.

THE LOSSES OF CALCIUM, PHOSPHORUS AND VITAMIN C IN FREEZING VEGETABLES AND DURING THE COOKING OF FROZEN VEGETABLES. V. M. Roberts, Oreg. State Coll. (Professional). IN PROGRESS

FOODS

Composition and Nutritive Value (Continued)
General (Continued)

Analyses are made for calcium, phosphorus and iron on both the raw and the cooked fresh vegetable. Samples from the same lot are frozen. Several months later the frozen vegetables are analyzed in both the raw and the cooked state. The study on peas and broccoli has been completed. The results show that there is a greater loss of phosphorus than calcium in the blanching process prior to the freezing of broccoli. Cooking after freezing results in a further loss of both calcium and phosphorus. The total losses, however, are no greater for the cooked frozen broccoli than for the cooked fresh vegetable. With frozen peas the losses of vitamin C are dependent upon (1) the solubility (2) the length of the cooking period (3) the length of time the vegetable stands before cooking. Thawing frozen peas at room temperature increases the vitamin C losses.

THE RATE OF LOSS OF CALCIUM, PHOSPHORUS AND ASCORBIC ACID DURING THE COOKING OF GREEN BEANS. L. J. Nyquist, under direction of I. T. Noble, Univ. Minn. (Departmental). (Master's Thesis 1942). IN PROGRESS

Experimental work is being done on the effect of different lengths of boiling on the amounts of calcium, phosphorus, and ascorbic acid which are lost from green beans.

CHANGES IN COLOR, AND IN CALCIUM, PHOSPHORUS AND ASCORBIC ACID CONTENT OF BEANS COOKED BY DIFFERENT METHODS. J. E. Corser, under direction of I. T. Noble, Univ. Minn. (Departmental). (Master's Thesis 1942).

Data are being collected on the calcium, phosphorus and ascorbic acid losses from and the color change in several varieties of green and lima beans during boiling, steaming, and cooking in a pressure sauce pan and in a pressure cooker. A modified McCrudden, the Fiske and Subbarow, the photoelectric indophenol, and the whirling-disc methods are being used to determine the calcium, phosphorus, ascorbic acid, and color respectively.

CHANGES IN CALCIUM, PHOSPHORUS AND ASCORBIC ACID CONTENT OF WHOLE AND CUT GREEN BEANS COOKED BY DIFFERENT METHODS. B. E. Newcombe, under direction of I. T. Noble, Univ. Minn. (Master's Thesis 1942). *In Progress*

Boiling and cooking in the pressure saucepan are the methods being used to prepare whole, cut and shredded green beans whose calcium, phosphorus and ascorbic acid content will be compared with that of the raw bean.

THE NUTRITIVE VALUE OF PEANUT PROTEIN. K. T. Holley (Chemistry) Ga. Expt. Sta. (Professional). Probable date of completion June 1942. IN PROGRESS

FOODS

Composition and Nutritive Value (Continued)
General (Continued)

The value of peanut protein compared to milk protein as a source of protein in the diet of rats is being studied. Investigations on the value of peanut protein replacing animal protein in chicken feed show that peanut meal fed at a high enough level can successfully replace the more expensive meat proteins.

THE GROWTH PROMOTING QUALITIES OF RAW AND COOKED PEANUTS. J. Hull, under direction of F. I. Scoular, North Texas State Teachers Coll. (Master's Thesis 1942). IN PROGRESS

The purpose of this study is to determine the effect of cooking upon the peanut as shown by growth study of white rats. The white rat is fed a basal diet to which the raw and cooked peanuts are added as a sole source of protein.

THE BIOLOGICAL VALUE OF THE PROTEIN OF FIELD PEAS AND THE EFFECT OF HEAT TREATMENT OF PEA PROTEIN. E. Woods and J. W. Pence, Univ. Idaho (Professional). Coop. with Depts. of An. Husband. and Agr. Chem. Reported in Notes on Research No. 6, p. 63, 1941. IN PROGRESS

This study of the field pea as a source of amino acids, and the effect of heat upon it, uses growth experiments with young rats and nitrogen balance experiments with adult rats as techniques, and casein as the standard of references. Peas provide a poorer supply of amino acids for growth than does casein under the same conditions. The heat treatment which is reported to improve soybean protein is detrimental to pea protein.

THE GROWTH-PROMOTING QUALITIES OF CANNED GREEN COW PEAS. E. P. Wilson, under direction of F. I. Scoular, North Texas State Teachers Coll. (Master's Thesis 1942). IN PROGRESS

Four types of cowpeas commonly grown for human consumption in Texas are being compared for their value in promoting growth of white rats. Female rats from the same strain and litter are fed at weaning a basal diet to which is added the cowpea to be tested. The fresh peas, canned with the pod ready for table use, are canned by the same individual according to specific directions. Preliminary data suggest that some cowpeas are superior to others in promoting the growth of the white rat.

NUTRITIVE VALUE OF SOYBEAN PROTEINS. G. Everson, under direction of H. T. Parsons and H. Steenbock, Univ. Wis. (Doctor's Thesis 1942). IN PROGRESS

The proteins of the soybean are fractionated and their physical and nutritive qualities studied chemically and biologically.

FOODS

Composition and Nutritive Value (Continued)
General (Continued)

A STUDY OF THE EFFECT OF DIFFERENT METHODS OF COOKERY UPON THE NUTRITIVE VALUE OF SOYBEAN PROTEINS. M. Primose, under direction of M. S. Reynolds, Univ. Wis. (Master's Thesis).

IN PROGRESS

In a comparison of the protein values of soybeans prepared in various ways nitrogen and sulfur balance studies on human subjects are used as criteria for protein utilization. In the first study soaked and unsoaked beans were fried in deep fat. Results indicate that the protein of cooked beans is more available. A second study in which beans first autoclaved and then roasted were compared with beans first roasted and then autoclaved indicates that moist heat preceding roasting makes the protein more available. A third study of the egg replacement value of baked soybeans is in progress.

A STUDY OF THE CHEMICAL PROPERTIES OF ARKANSAS GRAPES. H. Reynolds, Univ. Ark. (Professional). Coop. with Depts. of Hort. and Forestry. To be publ. as Ark. Expt. Sta. Bul. Reported in Notes of Research No. 5, p. 45, 1940.

COMPLETED

This study, summarized in the 1940 Notes on Research, has been prepared for publication in two bulletins, one dealing with variety composition and the other with rootstock effect on fruit composition.

THE CHEMICAL COMPOSITION AND NUTRITIVE VALUE OF SEVERAL FLORIDA HONEYS. O. D. Abbott and R. B. French, Fla. Agr. Expt. Sta. (Professional). Probable date of completion 1942.

IN PROGRESS

During the year material was made available for further analytical work on honeys. These analyses show that the composition of ripe honeys of a particular kind may vary slightly. In years when there is excessive rain fall during blossoming there is considerable variation in the percentage of water in fresh honey. The use of honey as a substitute for glucose in infant feeding continued during the year and the results confirm earlier findings, i. e., (1) honey can be used in smaller quantities than glucose, (2) it is more laxative, (3) it appears to have a quieting action as the babies are less nervous.

Some preliminary studies were made on the effects of honey in the treatment of individuals who were allergic or hyper sensitive to pollen~~s~~ from certain fall flowers. The results indicate that honey made from nectar from these flowers may be of value in desensitizing these individuals. In desensitizing the patient it is advisable that the initial dose be small. In several cases only one drop of honey was given daily for three or four days. After that, the dose was increased as rapidly as it could be tolerated.

Composition and Nutritive Value (Continued)
General (Continued)

CHEMICAL COMPOSITION AND PHYSIOLOGICAL PROPERTIES OF ROYAL JELLY.

O. D. Abbott and R. B. French, Fla. Agr. Expt. Sta. (Professional).
Probable date of completion 1945. IN PROGRESS

Since royal jelly, and certain fractions obtained from it, affect the sexual development of bee larvae, and the jelly also affects the time of maturity, size, coloring, shape, length of life, and instincts, it is thought that knowledge of the constituents of the jelly might throw considerable light on the essentials of animal as well as human nutrition. Data already collected show that royal jelly has a chemical composition similar to that of evaporated milk, and that about 3 percent consists of a previously undescribed hydroxy acid now in the process of identification. This acid apparently possesses certain physiological properties, such as inhibiting growth of molds and other fungi. Further work on the ether-soluble acid has indicated that its formula is $C_{10}H_{18}O_3$ (instead of H_{20}). Such a formula indicates the presence of a saturated ring structure. Attempted identification is proceeding through partial oxidative processes and the attempt to identify breakdown products. The protein of royal jelly has been fractionated into two major components, one evidently a globulin, the other albumin. These are present in the proportion of 1:2.

USE OF PRUNES IN DOG FOOD AND OF PRUNE PIT OIL. L. S. Bentley and M. Groody. A. F. Morgan, Univ. Cal., adviser (Professional). (Part of larger project, The Nutritive Value of California Prunes. Reported in Notes on Research No. 6, p. 1, 1941. COMPLETED

Prune paste made of whole prunes improved the nutrition of two generations of dogs when it was added to the extent of 20 percent to a mixture of 5 well-known dry dog foods. The blood vitamin A of the prune fed dogs was greater than that of the controls.

Prune pit oil sprayed on the dried prunes, was found to prevent sugaring and insect infestation during long time storage of the fruit. The oil did not become rancid nor was there any change in the vitamin content of the stored fruit.

NUTRITIVE PROPERTIES OF THE OIL OF EGG YOLK. R. Reder (Agr. Chem.), Okla. Agr. Expt. Sta. (Professional). Submitted for Publ. Jour. Poult. Sci. COMPLETED

FOODS

Composition and Nutritive Value (Continued)
General (Continued)

In this study of the comparative rates of absorption of egg oil and cod liver oil the percentage of egg oil and cod liver oil absorbed from the gastro-intestinal tract of rats., following the administration by stomach tube of approximately 1.5 ml. of each oil, was determined at the end of 2-, 4-, 6-, and 10-hour absorption periods. At the end of a 2-hour absorption period, 25.9 percent of egg oil and 30.7 percent of cod liver oil had been absorbed. At the end of a 10-hour absorption period, 97.7 percent of egg oil and 87.2 percent of the cod liver oil had been absorbed. The results indicated that egg oil was more readily absorbed than cod liver oil.

CERTAIN CHEMICAL CHARACTERISTICS OF EDIBLE FATS AND OILS. R. Hilton, under direction of G. E. Vail, Kans. State Coll. (Master's Thesis). On file Library, Kans. State Coll. Reported in Notes on Research No. 6, p. 32, 1941
COMPLETED

The purpose of this study was to determine the smoking point of certain fats and oils and the acid number of these fats and oils when fresh and after heating for different periods of time up to 20 hours. The smoking temperatures of the 27 fats studied varied from a high of 244.8° C. to a low of 169.9° C. The percentage of free fatty acids, as oleic, in fats tended to be inversely proportional to the smoking point.

THE PIGMENT INVOLVED IN THE STEM-BLACKENING OF COOKED POTATOES. H. W. Nutting, N. Y. State Coll. Home Econ., Cornell Univ. (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables. Publ. in Food Research (7), pp. 48-55, 1942. Reported in Notes on Research No. 6, p. 36, 1941.
COMPLETED

The purpose of the study was to investigate further the pigment involved in the stem-blackening of cooked potatoes and to further compare it with melanin from raw potatoes. Some properties, including the ultra-violet absorption spectra, of melanin and of pigments from blackened and non-blackened potatoes were studied. A gray-blue pigment and a yellow flavone-like pigment were separated by chromatographic absorption from water extracts of discolored potatoes. A similar yellow pigment was obtained from non-blackened tubers. The gray-blue pigment was quite unstable and appeared to be related to the yellow flavone derivative; it was dissimilar to melanin from raw potatoes.

FOODS

Composition and Nutritive Value (Continued) Minerals

MINERAL COMPOSITION OF FOODS. C. Chatfield, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Chemical Composition of Foods). Reported in Notes on Research No. 6, p. 12, 1941. IN PROGRESS

Data on calcium, phosphorus and iron in 64 foods has been issued as mimeographed material. Work on other foods has been deferred until later.

MINERAL COMPOSITION OF FOODS. L. Butler and G. Gilman, under direction of C. Chatfield, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Chemical Composition of Foods). Reported in Notes on Research No. 6, p. 11, 1941. IN PROGRESS

Analytical work on foods is being conducted with special attention to the content of iron, calcium, and phosphorus. Ionizable iron is being determined as a step in measuring the availability of the minerals to the body and determinations of oxalic acid will be made in foods that contain appreciable quantities of calcium. Biological tests will be added later. The project now is focused on dehydrated foods because of their importance in the war program. In order to determine the relation of moisture content to keeping quality and palatability in home-dried foods, moisture determinations are being made. Preliminary data have been obtained on calcium, phosphorus, and iron in dehydrated products: eggs, meats, soups, several green vegetables, potatoes, sweet potatoes, rutabagas, carrots and beets.

VARIATIONS IN THE COMPOSITION AND NUTRITIVE VALUE OF VEGETABLES GROWN IN OKLAHOMA. THE EFFECT OF FERTILIZER TREATMENT AND ENVIRONMENTAL CONDITIONS ON THE MINERAL CONTENT OF TURNIP GREENS. R. Reder (Agr. Chem.), Okla. Expt. Sta. (Professional). (Part of larger project, Variations in the Composition and Nutritive Value of Vegetables Grown in the South). Cooperation: Regional Cooperative, South. To be submitted for publ. in Jour. Agr. Research. Reported in Notes on Research No. 5, p. 4, 1940. COMPLETED

The purpose of the study was to determine the effect of fertilizer treatment and environmental conditions on the calcium, phosphorus and iron content of turnip greens products by uniform methods of planting and fertilizing in different areas (30 places) in each of 6 States. A factorial design was used for applications of N, P, K, and Ca in all possible combinations at a high and low level for each nutrient. In Oklahoma, turnip greens were planted at 3 locations in 1939 and 2 locations in 1940. In 1940 two crops were planted in one location, one was irrigated, the other was not irrigated. The results obtained in experiments conducted at 30 places indicate a wide variation in the mineral contents of the greens. Certain fertilizer treatments were found to affect significantly the calcium and phosphorus content of the greens. The influence of the place and soil composition was found to be very important. Environmental conditions were found to be important factors contributing to the effect of place.

FOODS

Composition and Nutritive Value (Continued)
Minerals (Continued)

THE VARIABILITY OF MINERAL ELEMENTS IN VEGETABLES GROWN UNDER VARIOUS ENVIRONMENTAL CONDITIONS IN SOUTHERN STATES. L. Ascham, M. Speirs, D. Maddox (and H. L. Cochran, Horticulture), Ga. Expt. Sta. (Professional). Part of larger project, Variations in the Composition and nutritive Value of Vegetables Grown in the South). Cooperation: Regional Cooperative, South. Probable date of completion one and one-half years. Reported in Notes on Research No. 6, p. 6, 1941. IN PROGRESS

The study of the effects of environmental conditions on the mineral content of turnip greens has been continued. Iron determinations on turnip greens grown under the plan of factorial design and previously analyzed for calcium and phosphorus are completed.

Cowpeas have been grown in two places in the State according to a plan similar to that used for the turnip greens. The analyses of the cowpeas for calcium, phosphorus, and iron are completed.

A STUDY OF THE VARIABILITY OF MINERAL ELEMENTS IN VEGETABLES GROWN UNDER VARIOUS ENVIRONMENTAL CONDITIONS IN SOUTHERN STATES. O. Sheets, M. Geiger, W. S. Anderson and L. McWhirter, Miss. State Coll. (Professional). (Part of larger project, Variations in the Composition and Nutritive Value of Vegetables Grown in the South). Cooperation: Regional Cooperative, South; and with Chem. and Hort. Depts. Probable date of completion, 1942 for the first sub-project. Reported in Notes on Research No. 6, pp. 6-7, 1941. IN PROGRESS

Samples of turnip greens from 13 additional crops grown in 3 States were analyzed for iron. Cowpeas were grown in 3 places in Mississippi according to the same plan as that used for turnip greens. Iron Analyses have been completed on the samples from two crops. The data on calcium and phosphorus in turnip greens obtained from the 1938, 1939 and 1940 experiments by the six cooperating experiment stations have been analyzed, and a paper is being prepared for publication.

THE MINERAL COMPOSITION OF VEGETABLES GROWN IN REPRESENTATIVE REGIONS OF TEXAS AND THE RELATION OF VARIATIONS IN MINERAL CONTENT TO THE PROBABLE NUTRITIVE VALUE. J. Whitacre, Tex. Agr. Expt. Sta. (Professional). Part of larger project, Variations in the Composition and Nutritive Value of Vegetables Grown in the South). Cooperation: Regional Coop., South. Probable date of completion December 1942. Reported in Notes on Research No. 6, p. 5, 1941. IN PROGRESS

Composition and Nutritive Value (Continued)
Minerals (Continued)

Seven Tops turnip greens, 1940 crop, from 2 localities averaged respectively 2.5 and 2.2% Ca, 0.70 and 0.65% P, 195 and 137 ppm Fe. Fe content was not significantly influenced by fertilizer applied factorially; Ca content was decreased by nitrogen fertilizer; P was increased by nitrogen and decreased by nitrogen + potassium. Of 4 varieties of greens at College Station, 1941 crop, one planting with complete fertilizer, and one unfertilized, the fertilized were significantly richer in P (average 0.84% vs. 0.39%), and more succulent (92.7% vs. 90.4% moisture), but poorer in Ca (2.38% vs. 3.03%). Fe was uninfluenced (fertilized 177, unfertilized 197 ppm). Varieties, fertilized, differed in P; unfertilized, in Fe. Fertilized Cream Crowder cowpeas had the same content of Ca (0.05%) and P (0.44%) as unfertilized, but slightly less Fe, 78.5 ppm vs. 92.5.

VARIATIONS IN THE COMPOSITION AND NUTRITIVE VALUE OF VEGETABLES GROWN IN OKLAHOMA, THE EFFECT OF FERTILIZER TREATMENT AND ENVIRONMENTAL CONDITIONS ON THE MINERAL COMPOSITION OF COWPEAS. R. Reder (Agr. Chem.) Okla. Expt. Sta. (Professional). (Part of larger project, Variations in the Composition and Nutritive Value of Vegetables Grown in the South). Cooperation: Regional Coop., South. Probable date of completion 1943. Reported in Notes on Research No. 5, p. 4, 1940
IN PROGRESS

The purpose of the study was to determine the effect of fertilizer treatment and environmental conditions on the calcium, phosphorus and iron content of cowpeas produced by uniform methods of planting and fertilizing in different areas of Oklahoma and the other cooperating States. A factorial design was used for applications of N, P, K and Ca in all possible combinations at a high and low level for each nutrient (16 treatments). In Oklahoma in 1941 cowpeas were planted in 3 typical areas of the State. At one location 6 replications were planted instead of the usual 2 replications. The mature cowpeas were collected from each experimental row (16 for each replication), washed and ground for analysis. The samples are to be analyzed for calcium, phosphorus and iron. Soil samples were taken at each area planted and records were kept of the meteorological date at each location. This will be repeated in 1942.

THE NUTRITIVE VALUE OF NEBRASKA FOOD PRODUCTS I. POTATOES. R. M. Leverton. M. Fedde, Univ. Nebr., adviser. Probable date of completion June 1942.
IN PROGRESS

The mineral distribution between cortex, phloem, and pith has been determined on Irish Cobbler, Warba and Red Triumph potatoes. Individual variation in tubers from different hills, different locations in the field and with two cultural practices has been studied. The analyses are completed but the figures are not analyzed.

FOODS

Composition and Nutritive Value (Continued)

Minerals (Continued)

EFFECT OF VARIETAL DIFFERENCES AND OF CONTROLLED SOIL TREATMENT ON THE CALCIUM AND PHOSPHORUS CONTENT OF POTATOES. J. H. Leichsenring. E. G. Donelson and L. M. Wall, Univ. Minn. (Professional). Coop. with Soils Division. Reported in Notes on Research No. 6, p. 9, 1941.
IN PROGRESS

THE UTILIZATION OF THE CALCIUM OF CAULIFLOWER AND BROCCOLI. M. L. Fincke, Oreg. State Coll. (Professional). Publ. in Jour. Nutr. 22, pp. 477-482 (1941). Reported in Notes on Research No. 6, p. 3, 1941.
COMPLETED

This work was undertaken to study the availability of the calcium of broccoli and cauliflower by a biological method previously described. The calcium utilization of broccoli was 9.2% lower than that for milk; and that of cauliflower 20.7% lower than that for milk. Both vegetables contained small amounts of oxalic acid and both contained 9.7% fiber on the dry basis, both of which might account for the lessened utilization of the calcium.

STUDIES ON THE AVAILABILITY OF CALCIUM. M. Speirs, Ge. Agr. Expt. Sta. (Professional). Probable date of completion June 1942. Reported in Notes on Research No. 6, p. 4, 1941.
IN PROGRESS

The availability of the calcium of turnip greens for use by young rats is similar regardless of variations of the greens in their content of this element caused by fertilizer variations. The effect of different levels of calcium in the diet on the percentage utilized has been measured.

EFFECT OF ADDING COCOA TO COW'S MILK ON THE UTILIZATION OF CALCIUM AND PHOSPHORUS. M. R. Cooney, under direction of W. S. Mueller and H. S. Mitchell, Mass. State College. (Master's Thesis 1942). Coop. with Dept. of Dairy Industries.
IN PROGRESS

There are many factors which may influence the utilization of calcium and phosphorus of milk. Interference with solubility of these minerals is a factor of concern in the addition of cocoa to milk, since cocoa contains oxalic acid, which may prevent the absorption of calcium by the formation of insoluble calcium oxalate. Accepted standard biologic and chemical procedures are being used to determine whether or not the utilization of these minerals is impaired by the addition of cocoa to milk.

CALCIUM CONTENT OF SOUTHERN CALIFORNIA CELERY AND ENDIVE AND ITS DISTRIBUTION IN THE INNER AND OUTER LEAVES. F. P. Urey, under direction of M. G. Mallon, U. C. L. A. (Master's Thesis).
IN PROGRESS

Utah type celery and broad leaved endive grown under known conditions as to fertilizers and calcium content of irrigation water is being analyzed for calcium. The McCrudden method is used.

FOODS

Composition and Nutritive Value (Continued)
Minerals (Continued)

THE IRON CONTENT OF PINTO BEANS. E. M. Lantz, New Mexico Coll. A gr. (Professional). (Part of larger project, The Iron and Copper Content of Pinto Beans and the Effect of Pinto Beans on the Regeneration of Hemoglobin in Anemic Rats). IN PROGRESS

The iron content of pinto beans grown in different parts of the State has been determined. The iron content of beans of the same strain grown in different parts of the State varies more than that of beans of different strains grown in the same part of the State. Beans high in iron tend to be relatively low in calcium. The iron of pinto beans is completely available for hemoglobin formation and there is some indication that some factor in the bean, other than iron or copper, is concerned with hemoglobin formation.

THE IRON CONTENT OF SMOOTH RURAL POTATOES. H. W. Nutting. M. C. Pfund N. Y. State Coll. Home Econ., Cornell Univ., adviser (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables). Accepted for publication by Food Research. Reported in Notes on Research No. 6, p. 9, 1941. COMPLETED

The iron content of Smooth Rural potatoes grown under known conditions and cooked by different methods was determined by the ortho-phenanthroline method. There were no significant differences in total iron content between the raw potatoes, and steamed or boiled potatoes when the cooked ones were peeled after cooking; pared potatoes lost approximately 10 percent during boiling. Iron content of baked potatoes, calculated on the raw basis, was similar to those boiled after paring. Much iron was found in the baked potato "shell" including adhering flesh. Total and ionizable iron content were similar. Salt had no effect on iron loss.

THE IRON CONTENT OF POTATOES. E. Crawmeyer, B. McCready and B. Mai, under direction of M. C. Pfund, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis). (Part of larger project, Quality of New York State Fruits and Vegetables). Coop: N. Y. State Coll. of Agr. Reported in Notes on Research No. 6, p. 8, 1941. IN PROGRESS

The iron content of different varieties of potatoes grown under different cultural conditions is being studied; also the distribution of iron in the potato and the relationship, if any, between iron content and blackening. Iron is determined by using a Cenco-Sheard-Sanford photometer to observe the color developed with ortho-phenanthroline. This is a continuation and expansion of work reported in the two previous issues of Notes on Research.

FOODS

Composition and Nutritive Value (Continued)

Minerals (Continued)

AVAILABLE IRON OF HAWAIIAN GROWN VEGETABLES. C. D. Miller and L. Louis, Univ. Hawaii (Professional). Probable date of completion Aug. 1943. IN PROGRESS

This is a study of the hemoglobin regenerating values of Hawaiian grown vegetables and their relation to the total and acid soluble iron as determined by chemical means. Foods are analyzed for their total iron and those with a relatively high iron content are used for feeding tests. The amount of hemoglobin regenerated by anemic rats when fed various foods is compared with a previously established curve of reference. Samples of the fresh and cooked vegetables as fed are reserved for chemical analyses of total and acid soluble iron.

THE AVAILABILITY OF IRON IN SOME COMMON FOODS. T. Porter and I. Bateman. M. Dye, Mich. State Coll., Adviser. Probable date of completion Sept. 1942. IN PROGRESS

The availability of iron in some common foods is being measured by both chemical and biological tests. The total iron is being determined by a thiocyanate method; the ionogenic iron by a-a-dipyridyl method. Biological utilization is being measured by hemoglobin regeneration in rats made anemic on milk and by analysis of the carcasses of all experimental animals for total iron storage. A number of Michigan-grown foods have been analyzed for their total iron content, including two types of soybeans, two of field beans, and two of wheat. Approximately 275 animals have now been employed in the biological tests. Preliminary results indicate that the iron of soybeans is well utilized by rats.

THE EFFECT OF HEAT ON THE AVAILABILITY OF THE IRON OF BEEF MUSCLE. H. Oldham. L. J. Roberts, Univ. Chicago, adviser (Professional). Jour. Nutr. 22, pp. 197-203, 1941. COMPLETED

Young rats, made anemic by a raw milk diet with added copper and manganese salts were paired as to litter, hemoglobin level, and weight. The members of each pair received isocaloric diets but different supplements which contained the same amounts of iron. In group A, oven-dried beef muscle and ferric chloride were given; in group B vacuum-dried beef muscle and ferric chloride and in group C oven-dried and vacuum dried beef muscle. The same amount of hemoglobin formation was observed when the supplement was oven-dried beef as when it was ferric chloride. Significantly less hemoglobin formation occurred when vacuum-dried beef was fed.

FOODS

Composition and Nutritive Value (Continued)
Minerals (Continued)

THE NUTRITIVE VALUE OF THE IRON OF COCOA AND OF IRON-FORTIFIED COCOA MIXTURES. F. Kinder, under direction of H.S. Mitchell and W. S. Mueller, Mass. State Coll. (Master's Thesis 1941). Coop: Dept. Dairy Industries (advisory capacity). On file Mass. State Coll. Library. COMPLETED

Inasmuch as iron is precipitated in the presence of tannic acid and since it has been demonstrated that there is from 2-15 percent tannic acid in commercial cocoa, there arises the question of the availability of iron of cocoa. Results indicated that the iron of cocoa was not so well utilized (approximately two-thirds as much hemoglobin regenerated) as an equivalent amount of ferric chloride. The addition of pure tannic acid did not decrease the utilization of iron added to milk. Iron added to cocoa was completely available, indicating that the factor which limited the nutritive value of iron of cocoa had no influence on added iron. Growth was retarded in the groups of rats which received cocoa and tannic acid, the effect of the tannic acid was less severe.

THE RELATION OF COBALT TO LIVESTOCK PRODUCTION IN ALABAMA. W. C. Sherman and W. D. Salmon (An. Husbandry), Ala. Expt. Sta. (Professional). IN PROGRESS

The purpose of this project is to determine whether forage and feed crops in the various soil regions of Alabama contain enough cobalt for optimum nutrition of livestock.

SPECTROGRAPHIC ANALYSIS OF RAT TISSUES FOR INGESTED VANADIUM. E. P. Daniel, E. M. Hewston and M. V. Kies, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Nutritional Significance of Trace Elements - Vanadium). On file Bur. Home Econ., U.S.D.A. Reported in Notes on Research No. 4, p. 66, 1939. COMPLETED

A method was developed for the quantitative spectrographic determination of vanadium in biological material. Chromium was used as the internal standard and it was possible to determine as low as 1-5 ppm of vanadium. Analyses of tissues from rats ingesting various amounts of vanadium in their food showed the greatest concentration of this element in the kidney. In descending order, liver, testes, spleen, lungs, and heart muscle showed considerable quantities of this mineral element.

Composition and Nutritive Value (Continued)
Vitamins (general)

A COMPILATION OF THE VITAMIN VALUES OF FOODS IN RELATION TO PROCESSING AND OTHER VARIANTS. L. E. Booher, E. R. Hartzler and E. M. Hewston, Bur. Home Econ., U.S.D.A. (Professional). To be published as U.S.D.A. Circular 638 (in press). On file Bur. Home Econ., U.S.D.A. Reported in Notes on Research No. 6, p. 13, 1941. COMPLETED

A supplement to keep this material up to date is being prepared.

TABLES OF THE VITAMIN CONTENT OF AMERICAN FOODS IN TERMS OF 100 GRAMS, POUNDS, AND COMMON MEASURES. E. M. Hewston and R. L. Marsh. E. O. Keiles, Bur. Home Econ., U.S.D.A. adviser (Professional). To be publ. as a U.S. Dept. of Agriculture publication. On file Bur. Home Econ., U.S.D.A.

Average vitamin A and D, thiamine, ascorbic acid, and riboflavin values for American food stuffs have been prepared from the data presented in U.S.D.A. Circular 638, "A compilation of the vitamin values of foods," (Notes on Research, vol. 6, p. 13, 1941) for 100 grams, pounds, and common measures.

INVESTIGATION OF THE NUTRITIVE VALUE OF FOODS. Staff of Nutrition Investigations Sect. E. C. Keils, Bur. Home Econ., U.S.D.A., adviser (Professional). Coop: Bureaus Plant Industry, Animal Industry and Entomol. & Plant Quarantine, U.S.D.A. IN PROGRESS

The vitamin content of the following foods is being determined by chemical, microbiological, and/or rat growth methods, using raw and home-processed matched samples: different varieties of wheat, flours from these wheats of different extractions, and bread made from these flours; different varieties of pollen; various kinds of honey; meats cooked by various methods; other common foods, raw and cooked.

THE VITAMIN CONTENT OF DEHYDRATED FOODS. Members of the staff of Nutrition Investigations Sect., under direction of E. O. Keiles, Bur. Home Econ. U.S.D.A., adviser (Professional). Coop.: Bureau of An. Industry, U.S.D.A. IN PROGRESS

The effect of home dehydration methods on the vitamin content of a number of different varieties of vegetables, several kinds of meats and also eggs is being studied. Depending upon the food, any or all of the following vitamins are being determined by chemical microbiological, and/or rat growth methods: carotene, thiamine, riboflavin, nicotinic acid, and ascorbic acid. Values for matched samples of fresh, dehydrated, and stored foods, raw and cooked, are determined. Some foods prepared by commercial methods of dehydration are also being tested.

FOODS

Composition and Nutritive Value (Continued)
Vitamins (general) (Continued)

A STUDY OF CHEMICAL TESTS FOR THE VITAMINS. W. Z. Bock, under direction of L. S. Weatherby (Dept. of Chem.), Univ. So. Cal. (Master's Thesis 1941). On file Univ. So. Cal. Library.

The various chemical tests for vitamins were investigated to ascertain their practicability in routine test work. All the more important tests for vitamins A, B, and C were applied to materials which the longer biological methods had shown to be important sources of these vitamins. Values obtained by the various methods were compared.

Success of absorption spectro-photometers in the assay of vitamin A indicated that similar devices could be used for other vitamins in commercial analysis. Colormetric tests have not yielded valid results for all vitamins.

LOSSES OF VITAMINS FROM QUICK-FROZEN VEGETABLES. E. Gleim, under direction of D. K. Tressler (Dept. of Chem., N. Y. State Expt. Sta.) and F. Fenton, N. Y. Coll. Home Econ., Cornell Univ. (Master's Thesis 1943). Coop. with State Expt. Sta., Geneva. IN PROGRESS

The purpose of this study is to determine the factors in cooking which affect the losses of certain vitamins from quick-frozen foods. The dichlorophenolindophenol titration method is being used for ascorbic acid and the thiochrome method for thiamin.

THE VITAMIN CONTENT OF CANNED AND WAXED CHEESE AFTER AGING AND AFTER STORAGE. R. Tanner, under direction of J. McIntosh, Wash. State Coll. (Master's Thesis 1943). Coop. with Dairy Dept. IN PROGRESS

Canning is a comparatively recent method for storing cheese. As far as can be found no study has been made on the vitamin content of canned cheese and relatively little on the vitamin content of cheddar cheese during storage. It is the aim in this study to compare canned and waxed cheddar cheese after aging one month then after six and twelve months respectively. This will be done by animal assays for vitamin A and a chemical analysis of the vitamin A and B content.

FOODS

Composition and Nutritive Value (Continued)

Vitamins (general) (Continued)

THE CAROTENE AND ASCORBIC^{acid} CONTENT OF CHILE AND THE EFFECT OF DRYING AND CANNING ON THESE FACTORS. E. M. Lantz, New Mexico Coll. of Agr. and Mech. Arts (Professional). Reported in Notes on Research No. 6, p. 14, 1941. IN PROGRESS

The carotene and ascorbic acid contents of several varieties of peppers are being determined chemically and the carotene values are being checked by rat-feeding tests. Fresh green and ripe peppers are rich sources of both of these vitamins.. The loss of carotene in canning is very small if the canning is carefully done. The loss of ascorbic acid is greater than that of carotene. Commercially canned peppers vary widely in their content of these vitamins. Peppers lose some carotene during drying and the dried pods lose still more during storage but retain enough to be an important source of vitamin A. A few samples of dried peppers contained very small amounts of ascorbic acid but most contained none,

THE B VITAMIN VALUE OF CALIFORNIA GRAPE JUICES AND WINES AND THE STABILITY OF ADDED VITAMINS. L. Perlman, under direction of A. F. Morgan, Univ. Cal. (Professional). IN PROGRESS

Experimental wines and the grape juices from which the wines were made are examined by biological, chemical and microbiological methods for the B vitamins. Part of each lot was fortified by addition of vitamins and re-examined after storage under known conditions. Both juices and wines appear to retain well the vitamins, natural and added.

THE VITAMIN B COMPLEX DISTRIBUTION IN CALIFORNIA RICE--POLISHED, BROWN, CANNED AND PARBOILED. R. Cailleau, A. F. Morgan, Univ. Cal., Adviser (Professional). COMPLETED

Raw, cooked and canned brown rice was found to be a good source of thiamin, nicotinic acid and pantothenic acid and a fair source of riboflavin. Parboiled undermilled rice retained a much larger amount of these vitamins than did the polished form.

THE FRACTIONATION OF THE FACTORS OF THE B-COMPLEX PRESENT IN RICE POLISHINGS. E. M. Hewston and E. R. Hartzler. L. E. Booher, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 71, 1941. COMPLETED

AVAILABILITY OF CERTAIN OF THE VITAMINS OF THE B-COMPLEX FROM YEAST. J. Collord, under direction of H. T. Parsons, Univ. Wis. (Master's Thesis 1942). IN PROGRESS

The metabolism of thiamin and riboflavin from yeast under different treatments is being studied in human subjects.

FOODS

Composition and Nutritive Value (Continued)

Vitamin A

VITAMIN A ACTIVITY OF FOODS. R. B. French and O. D. Abbott, Fla. Agr. Expt. Sta. (Professional). Probable date of completion, July 1944. IN PROGRESS

Both vitamin A and carotene content of Florida grown foods are being determined with the view of formulating diets to increase the vitamin A intake of the 40 percent of rural children in Florida found to have symptoms of vitamin A deficiency. Both chemical and biological determinations have been run simultaneously. The following varieties of avocados have been analyzed for carotene: Pollock, Trapp, Walden, Booth, Lula, Collison. In terms of micrograms of carotene per gram of fresh material these fruits varied from 5.1 in the Pollock to 1.3 in the Lula. In addition to avocados, peaches, plums, strawberries, and huckleberries have been analyzed for carotene. The chemical determination of carotene and vitamin A in clover and milk was checked with the biological determinations with essential agreement. In an effort to increase the carotene content of certain pasture grasses used in dairy feeds the source of nitrogen fertilizer was varied. It was found that when the source of nitrogen was ammonia rather than nitrate carotene synthesis was increased considerably in Sudan grass while the effect on Bahia was small but definite. Photometric methods for carotene and vitamin A were used. The bio-assay with rats by the U.S.P.XI technique was compared with the differential leucocyte method of diagnosing vitamin A deficiency to determine if the latter can be placed on a quantitative basis.

THE VITAMIN A CONTENT OF DEHYDRATED SWEET POTATO MADE FROM FRESHLY HARVESTED PUERTO RICO VARIETY. C James, under direction of F. I. Scoular, No. Texas State Teachers Coll. (Master's Thesis 1941). Publ. in Abstra. of Dallas Meeting of the Amer. Zool. Soc., Div. Physiol. On file North Tex. State Teach. Coll. Library. Reported in Notes on Research No. 6, p. 15, 1941. COMPLETED

To determine the vitamin A content of the stored dehydrated sweet potato made from freshly harvested Puerto Rico variety, 54 albino rats were divided into groups of 6 animals each, 3 males and 3 females. Reference cod liver oil was fed to five groups at levels ranging from 55.1 I.U. to 165.2 I.U., while the test substance, dehydrated sweet potato, was given to 4 groups at levels of 1.5 grams, 1.0 gram, 0.7 gram, and 0.5 gram. The average total gain for the group of animals receiving 1.0 gram of dehydrated sweet potato as the only source of vitamin A was 1.35 grams per day and corresponded closely to the total gain, 1.30 grams per day, made by the animals receiving 130.2 I.U. in reference oil.

FOODS

Composition and Nutritive Value (Continued)
Vitamin A (Continued)

THE DETERMINATION OF THE VITAMIN A CONTENT OF THE DEHYDRATED SWEET POTATO MADE FROM STORED SWEET POTATOES. V. E. Dozier, under direction of F. I. Scoular, No. Texas State Teachers Coll. (Master's Thesis 1941). Publ. in Abstr. Dallas Meeting of the Amer. Zool. Soc., Div. Physiol. On file North Tex. State Teachers Coll. Library. Reported in Notes on Research No. 6, p. 15, 1941

COMPLETED

The vitamin A content of the dehydrated sweet potato was determined by the biological method of assay. The material tested was Wilson's dehydrated product made from the stored Puerto Rico Variety of sweet potato. A reference cod liver oil was used in determining the number of International Units of vitamin A furnished per gram of the material. This value was compared with Sherman-Munsell Units reported for fresh and dried sweet potatoes. The results of the study showed that the sample of dehydrated sweet potato tested, in the manner described, furnished not less than 102 International Units per gram of substance.

BIOLOGICAL ASSAY OF THE VITAMIN A CONTENT OF VITA YAM (DEHYDRATED SWEET POTATO) PRODUCTS. J. Ballew, under direction of F. I. Scoular, No. Texas State Teachers Coll. (Master's Thesis 1942).
IN PROGRESS

The purpose of this study is to determine the effect of cooking, if any, upon the dehydrated sweet potato product known as vita yam. Two common products, sweet potato pie and sweet potato cookies, are being tested and compared with a vitamin A reference oil for growth in the white male rat.

THE VITAMIN A CONTENT OF MILK AND STORAGE TISSUES OF DAIRY CATTLE AS RELATED TO PASTURE AND FEEDING PRACTICES. C. J. Koehn and W. D. Salmon (An. Husbandry), Ala. Expt. Stat. (Professional). IN PROGRESS

The purpose of this study is to determine the seasonal variation in the vitamin A content of milk when common practices of feeding cows in this area are followed and to determine the level of vitamin A in storage tissues of dairy cows in periods of low carotene intake. The effect of winter pasture on the vitamin A content of milk is also being studied. During the winter months the vitamin A content of milk drops to one-fourth the value found during the summer months. By the use of rye, crimson clover, or other temporary winter pasture the summer level of vitamin A may be maintained.

FOODS

Composition and Nutritive Value (Continued)

Thiamin

AN EVALUATION OF METHODS USED IN SAMPLING FOODS AND IN EXTRACTING THE THIAMIN FROM FOODS IN STUDIES ON THIAMIN CONTENT OF FOODS. M. Skinner, under direction of J. Outhouse and N. Esselbaugh, Univ. Ill. (Master's Thesis). (Part of larger project, Methods for Determining Nutritional Status in respect to Thiamin). IN PROGRESS

The purpose of the study is to find the method of sampling and extraction which will give the maximal value for thiamin in foods. Various methods in current use are being studied or modified.

EFFECT OF DIFFERENT METHODS OF COOKERY ON THE THIAMIN CONTENT OF FOODS. M. Bricker, under direction of J. Outhouse and N. Esselbaugh, Univ. Ill. (Master's Thesis). (Part of larger project, Methods of Determining Nutritional Status in Respect to Thiamin). IN PROGRESS

The purpose of the study is to find acceptable methods for reducing the thiamin content of foods to be fed to a group of subjects in whom a thiamin deficiency is to be induced. The foods, before and after cooking, will be analyzed for thiamin by means of the thiochrome test.

QUANTITATIVE DETERMINATION OF VITAMIN B₁ IN CHAYOTE. J. M. Ballard, under direction of M. H. Brookes, Univ. Chicago (Master's Thesis 1941) On file Univ. Chicago Library. COMPLETED

The vitamin B₁ content of chayote, obtained from California (1 season) and from Puerto Rico (2 seasons), was determined by a Sherman modified rat growth technique, using thiamin standard rat growth curves. The values obtained ranged from 11 to 17.5 I. U. per 100 grams of the fresh fruit. Other analyses of interest gave values as follows: ash. 0.487 per cent; calcium 0.0109; phosphorus, 0.0165; and iron, 0.00026 percent. Three fruits averaged 10.2 mg. of ascorbic acid per 100 grams.

EFFECT OF COOKING UPON THE VITAMIN B₁ CONTENT OF TWO TYPES OF BEANS GROWN IN MICHIGAN. E. Kelly and T. Porter. M. Dye, Mich. State Coll. ~~adviser~~. (Professional). Publ. in Food Res. 6, pp. 85-93 (1941). COMPLETED

In this study of the effect of two standard cooking procedures upon the vitamin B₁ content of beans, the B₁ rat-growth assay method of Chase and Sherman was used. The boiling and baking processes used resulted in cooked beans which were estimated to have more available vitamin B₁ than the same beans in the raw state. There was no loss of vitamin B₁ during a 16-hour soaking period. Soda, used as a softening agent during soaking, but thoroughly rinsed off before cooking, shortened the cooking time but did not cause a destruction of vitamin B₁.

FOODS

Composition and Nutritive Value (Continued)

Thiamin (Continued)

A STUDY OF THE VITAMIN B₁ CONTENT OF BEANS. E. Kelly and T. Porter. M. Dye, Mich. State Coll., adviser. IN PROGRESS

Two reports on this project have been completed and published (see above; also Notes on Research No. 6, p. 16, 1941).

It is hoped that the scope of this study may be increased to include some work on digestibility and on utilization of beans prepared by various cookery procedures.

THIAMIN VALUES OF FROZEN VEGETABLES: PEAS, GREEN BEANS, CORN. M. L. Fincke and J. Perkins, Oregon State Coll. (Professional). Reported in Notes on Research No. 6, p. 16, 1941. IN PROGRESS

Thiamine values of fresh and frozen vegetables, raw and cooked are being determined by the rat curative and fluorometric (modified Hennessey and Cerecedo) methods. Results on peas obtained with the two methods agree within experimental error. Peas, string beans and corn of different varieties are being studied. From results to date there appears to be no loss in freezing, and about a 21% loss in cooking the frozen peas or beans.

STABILITY OF THIAMIN IN QUICK COOKED CEREALS ENRICHED WITH MINERALS AND VITAMINS. A. B. Eklund, under direction of V. R. Goddard, U.C.L.A., (Master's Thesis 1942) IN PROGRESS

The objective is to determine the effect upon thiamin of the quick cooking of cereal which is vitamin and mineral enriched. After determining pH values (using the Beckman pH-Meter) of several uncooked cereals, we have selected the one with the highest pH (7.2) for further study. Weighed amounts of raw and cooked cereal are fed to rats and their growth curves are charted. Synthetic thiamin hydrochloride is fed as a basis for estimating the vitamin values of the cereals. Results to date indicate no loss of vitamin B₁ as a result of the quick cooking of mineral and vitamin enriched cereals.

FOODS

Composition and Nutritive Value (Continued)

Thiamin (Continued)

THE VITAMIN B₁ CONTENT OF DIFFERENT VARIETIES OF RICE. S. R. Henderson, under direction of H. J. Davis, La. State Univ.
Probable date of completion 1944. IN PROGRESS

Samples of 6 common varieties of rice were obtained from the Rice Experiment Station at Crowley, Louisiana, and their content of vitamin B₁ was determined by chemical procedures. The results expressed as micrograms per gram, are summarized as follows for the different varieties of whole brown rice: Early Prolific 4.86; Improved Blue Rose 4.53; Fortuna 4.38; Nira ~~4.02~~^{4.02}; Rixora 3.84; and Stransel 3.30; expressed as I. U. per gram the corresponding values are 1.62; 1.51; 1.46; 1.34; 1.28; and 1.10.

While this is regarded as a preliminary report there does appear to be a significant difference in the vitamin B₁ content of different varieties of rice. Further studies are in progress to determine the distribution of vitamin B₁ in different parts of the rice kernel.

COMPARISON OF THE THIAMIN CONTENT OF A SPECIALLY MILLED FLOUR CONTAINING THE ALEURONE LAYER AND A WHITE FLOUR MILLED IN THE ORDINARY MANNER FROM THE SAME WHEAT. Sister Rose Genevieve, under direction of P. Nutter, Kans. State Coll. (Master's Thesis). (Part of larger project, Vitamin Content of Food in Relation to Human Nutrition). On file Library, Kans. State Coll. Reported in Notes on Research No. 6, p. 17, 1941.

COMPLETED

Using the rat curative procedure of Kline, Tolle, and Nelson, thiamin assays were made on (1) ground whole wheat, (2) white flour specially milled (Morris process), and (3) white flour milled in the Buhler mill at the college. All samples were of the same wheat. Cooked cream of wheat and meat loaf, with and without added wheat germ, were also assayed for thiamin, using the same method. Results of assays per gm. of material: Whole wheat, 6 micrograms; Buhler flour, 2.4; Morris flour, 1.6; cooked cream of wheat, none; cooked cream of wheat containing 42% wheat germ, 1.7 micrograms. Meat loaf made with cracker crumbs was 3.6 micrograms lower in thiamine than the one in which wheat germ replaced crackers.

FOODS

Composition and Nutritive Value (Continued)
Thiamin (Continued)

THE VITAMIN B₁ (THIAMIN) CONTENT OF CERTAIN VARIETIES OF KANSAS GROWN WHEATS. B. D. Westerman. M. S. Pittman, Kans. State Coll., adviser (Professional). (Part of larger project, Vitamin Content of Food in Relation to Human Nutrition). Coop.: Samples furnished by Dept. of Milling Industry, Probable date of completion Aug. 1, 1942. IN PROGRESS

It is desired to study the thiamin content of certain Kansas-grown wheats and of flours made from these wheats. The method to be employed for the determinations on wheats is the rat curative procedure of Kline, Tolle and Nelson. The rat growth method of Kline, Hall and Morgan, J. Assoc. Official Agr.

Chemists 24, p. 147, 1941, may be used for flour. The findings to date show the thiamin content of Turkey wheat to be about 750 I. U. per pound while that of Chieftan is about 600 I. U. per pound.

A DETERMINATION OF THE VITAMIN B₁ CONTENT OF UNCREAMED COTTAGE CHEESE. H. M. Robinson, under direction of M. H. Brookes, Univ. Chicago (Master's Thesis 1941). On file, Univ. Chicago Library. COMPLETED

The standard adsorbate was used as reference standard with the Sherman rat growth method for the determination of the vitamin B₁ content of uncreamed cottage cheese. One-half International Unit was found in 2.6-2.7 grams of this cheese. It was calculated that there are 18.5-19.2 I. U. vitamin B₁ per 100 grams.

THE EFFECT OF COOKING ON THE THIAMIN CONTENT OF MEAT. S. Cover and P. B. Pearson (An. Husbandry), Tex. Agr. Expt. Sta. (Professional) IN PROGRESS

Roasts of beef will be cooked rare, medium, and well-done by the method of cooking which the Conference of Cooperative Meat Investigations recommends for home use. Thiamin will be determined in the raw and the cooked meat and the percentage destruction by various methods will be calculated. The details of the project have been planned so that the data may be treated statistically.

Composition and Nutritive Value (Continued)

Riboflavin

THE RIBOFLAVIN CONTENT OF FOODS COMMONLY USED IN THE SOUTH. H. J. Davis, La. State Univ. (Professional). Probable date of completion 1943. IN PROGRESS

The project includes a study of the stability of riboflavin to various cooking and storage processes. A modification of the Snell and Strong microbiological procedure is being used for quantitative determinations of riboflavin. The study thus far has been limited to rice and the by-products of rice. The results indicate that these are not particularly good sources of riboflavin. The riboflavin content in different fractions of rice varies from 3 to 6 parts per million.

Nicotinic acid

A STUDY OF THE NICOTINIC ACID CONTENT OF FOODS COMMONLY USED IN THE SOUTH. H. J. Davis, La. State Univ. (Professional). Probable date of completion 1943. IN PROGRESS

Chemical and microbiological methods of nicotinic acid determinations are being compared to determine which method is most desirable for routine assays. It appears that the microbiological procedure has several definite advantages over the chemical procedure. The only assays completed have been on rice polishings. The results obtained show that rice polishings contain considerably more nicotinic acid than most common foods and about one-half as much as is present in dried yeast.

Ascorbic acid

VITAMIN C CONTENT OF WINTER FRUITS AND VEGETABLES. H. L. Mayfield, J. E. Richardson, Mont. State College. adviser (Professional). (Part of larger project, Vitamin C Metabolism of College Students). Coop.: Regional Northwest. Publ. as Mont. Agr. Expt. Sta. Bull. 390, 1941. COMPLETED

This study was undertaken to provide information about the vitamin C content of the fruits and vegetables available in Montana during the winter months. The data obtained were needed to better interpret the findings of a larger project on the vitamin C Nutritional status of college women. About 85 fruits and vegetables were tested for their vitamin C content, after being prepared for table use. The colorimetric method using the Bessey technic was employed. The size of a serving of each food was established, and the 1940-41 price per serving was given. From this information, it was possible to show the approximate vitamin C value and cost per serving of the various fruits and vegetables.

FOODS

Composition and Nutritive Value (Continued)
Ascorbic Acid (Continues)

VITAMIN C IN FLORIDA FRUITS AND VEGETABLES. R. B. French and O. D. Abbott, Fla. Agr. Expt. Sta. (Professional). Probable date of completion 1944. IN PROGRESS

The vitamin C in several varieties of avocados determined by chemical methods varies from 7 to 13 mg. of ascorbic acid per 100 mg. fresh fruit in the Collison and Lula to 31 and 37 mg. in the Trapp and Pollock. In general it was found that the earlier varieties had a higher C content than the mid-season or late ones.

Papayas proved to be a fair source of vitamin C, averaging 35 mg. ascorbic acid per 100 grams of fruit. The skin ran slightly higher, averaging 45 mg., while the seed gave about double this value, namely 80 mg. Apparently the seeds, unlike the fruit, contain dehydroascorbic acid since after hydrogen sulphide reduction the value for the seed averaged 144 mg. per 100 grams.

Determinations were made also on Florida peaches, grapes, plums, figs, watermelons, cucumbers and lettuce. Strawberries and cantaloupes from certain sections were relatively high in C. In fact some cantaloupes ran as high as 108 mg. of ascorbic acid. However, the average value was about 15 mg. An attempt is now being made to find the reason for this difference.

A STUDY OF THE VITAMIN C CONTENT OF FRUITS AND VEGETABLES COMMONLY PRODUCED IN LOUISIANA. M. Hollinger. H. J. Davis, La. State Univ. adviser. Probable date of completion 1945. IN PROGRESS

In the study consideration is being given to the variation in the content of this vitamin due to variety differences, storage, and cooking. The work on this project thus far has been limited to a study of the vitamin C content of different varieties of sweet potatoes and the loss of this vitamin due to storage and various cooking methods. The results thus far obtained show that sweet potatoes are a very good source of vitamin C, and, that there is no measurable destruction of vitamin C after a ninety day storage period. The vitamin C content of different varieties of sweet potatoes is significantly different. There is a loss of about 25% of the vitamin C content of sweet potatoes when they are boiled and a loss of about 20% of the vitamin C content when they are baked. This project is being continued in order to measure the stability of vitamin C over a storage period of several months.

FOODS

Composition and Nutritive Value (Continued)
Ascorbic Acid (Continued)

THE ASCORBIC ACID CONTENT OF DIFFERENT VARIETIES OF APPLES AS AFFECTED BY MATURITY AND STORAGE. L. R. Hornstein. E. O. Keiles, Bur. Home Econ., U.S. D.A., adviser (Professional). (Part of a larger project, Investigation of the Nutritive Value of Foods). Coop.: Bureau Plant Industry, U.S.D.A. COMPLETED

The ascorbic acid content of different varieties of apples was determined at the stage of maturity when picked for storage and during storage under conditions similar to those used commercially. Pared and unpared samples were analyzed before storage and at the end of each month of storage at 32° C. and after a ripening period of 1 week at 70° C. Differences between varieties were greatest in the immature apples. Largest losses of ascorbic acid occurred during the first month of storage at 32° C. and during 1 week of storage at 70° C. Analyses were also made of the apples baked and when made into sauce.

VITAMIN C VALUES OF MONTANA STRAWBERRIES. H. L. Mayfield, Mont. State Coll. Probable date of completion June 1943. Reported in Notes on Research No. 6, p. 24, 1941. IN PROGRESS

The effects of various methods of preservation on the vitamin C value of Montana strawberries are being studied. Two varieties of strawberries, one a seasonal and one an everbearing type are preserved for winter use in the form of jams, jellies, preserves, sauce and by freezing. Ascorbic acid tests, using the Evelyn photoelectric colorimeter and the Bessey technic, are made on these products at the time of preparation and at various intervals up to 9 months storage. There are indications that all methods of preservation cause a considerable and rather uniform loss of vitamin C.

THE AVAILABILITY FOR HUMAN NUTRITION OF THE VITAMIN C IN RAW CABBAGE AND HOME CANNED TOMATO JUICE. M. M. Clayton. P. S. Greene, Univ. of Maine, adviser (Professional). (Part of larger project, The Relation of the Dietary Habits and Food Resources of Maine People to their State of Nutrition with Respect to Vitamin C). Probable date of completion, Summer 1942. IN PROGRESS

The purpose of the study is to compare the utilization by human subjects of equal amounts of vitamin C given in these foods and as pure vitamin C tablets. The procedure is to first saturate the subjects with vitamin C. They are then put on a neutral basal diet low in vitamin C and are given 75 mg. of vitamin C daily in tablet form. When the vitamin C in the urine reaches a base line, determinations are made of the vitamin C in the blood and the pH of the urine. After another saturation period the test food is given and the same procedure followed as with the tablets. A comparison is then made of the results obtained during the periods on tablets and on the test food.

Composition and Nutritive Value (Continued)
Ascorbic Acid (Continued)

A STUDY OF THE CHARACTERISTICS OF CERTAIN FRESH, CANNED AND FROZEN VEGETABLES. S. S. Scurr, under direction of P. K. Sprague, Penna. State Coll. (Master's Thesis 1941). Publ. in the Chemistry Leaflet XV;4, 83-84. Reported in Notes on Research No. 6, p. 21, 1941.
COMPLETED

Green lima beans and broccoli were grown under supervised cultural conditions. Samples of each of these foods were canned by two methods and quick frozen. The difference in vitamin C content was studied with certain lapses of time for the canned and frozen foods. A jury was used in judging the palatability, flavor, and other subjective characteristics of green lima beans and broccoli used in this study.

LOSSES OF VITAMIN C DURING VARIOUS METHODS OF COOKING BROCCOLI AND ASPARAGUS. E. J. Brown, under direction of F. Fenton, N. Y. Coll. Home Econ., Cornell Univ. (Doctor's Thesis 1943). (Part of larger project, Losses of Vitamin C During the Cooking of Vegetables). Coop.: Coordinated with projects in Div. Chem. of N. Y. State Agr. Expt. Sta. Reported in Notes on Research No. 6, p. 21, 1941.
IN PROGRESS

In this study to determine vitamin C losses during the cooking of fresh and home-quick-frozen broccoli and asparagus by different methods and in utensils of different materials, a modification of the chemical titration method of Bessey and King is used to determine the amount of ascorbic and dehydroascorbic acid. When the study is completed it should be possible to state what important factors in home freezing and cooking affect the retention of vitamin C in these vegetables.

FACTORS AFFECTING THE RETENTION OF ASCORBIC ACID DURING THE COOKING OF QUICK-FROZEN BROCCOLI. B. Barnes, under direction of F. Fenton (and D. K. Tressler, N. Y. State Agr. Expt. Sta., Geneva, Dept. of Chem.), N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis). Coop.: State Expt. Sta., Geneva and State Coll. of Home Econ., Ithaca. Reported in Notes on Research No. 6, p. 22, 1941
COMPLETED

The experimental cooking procedures included cooking with varying amounts of water for different periods of time as well as the use of utensils of different types and materials. These utensils included saucepans of aluminum and stainless steel, pressure saucepans, and a pressure cooker. A modification of the chemical titration method of Bessey and King was used to determine the amount of ascorbic acid and dehydroascorbic acid.

FOODS

Composition and Nutritive Value (Continued)

Ascorbic Acid (Continued)

LOSSES OF VITAMIN C DURING VARIOUS METHODS OF COOKING PARSNIPS. E. J. Brown, under direction of F. Fenton, N. Y. State Coll. Home Econ., Cornell Univ. (Doctor's Thesis). (Part of larger project, Losses of Vitamin C During the Cooking of Vegetables). Coop.: Coordinated with projects in Div. of Chem. of N. Y. State Expt. Sta. Abstr. in Jour. Home Econ. 33, p. 595, 1941. Complete rept. in press, Food Research, 1942. Reported in Notes on Research No. 6, p. 21, 1941. COMPLETED

The purpose of this study was to determine the vitamin C content of raw parsnips, the effect of various methods of cooking, the effect of the composition of the cooking utensil and incidentally, the losses of vitamin C during storage. The dichlorophenolindophenol titration method for vitamin C was used. Parsnips boiled whole, unpeeled, and parsnips cut in pieces and cooked in the pressure saucepan gave the best vitamin C retentions of the methods used, 91 and 90 percent, respectively. Parsnips steamed whole, unpeeled, and parsnips cut in pieces and boiled retained 86 percent of their original vitamin C.

QUALITY APPRAISAL OF UTAH-GROWN FRUITS AND VEGETABLES. A. P. Brown and F. Moser, Utah Agr. Expt. Sta. (Professional). (Part of larger project, Freezing Preservation of Utah Fruits and Vegetables). Coop. with Depts. of Hort. and Veg. Crops and U.S.D.A. Regional Lab. at Albany, Calif. Reported in Notes on Research No. 6, p. 46, 1941. IN PROGRESS

Ascorbic acid values of 20 varieties and strains of fresh peas raised at the Farmington Experimental Farm were determined by the dye titration method. With one exception these were the varieties and strains raised on the North Logan farm in 1939, and upon which ascorbic acid determinations were made during that season. Maximum values in the two seasons were found much the same, but the range in values was found to be much smaller in the 1941 season. This is believed to result from more careful handling of samples and elimination of delays between harvesting and ascorbic acid determinations.

LOSSES OF VITAMIN C DURING THE COOKING OF SUMMER SQUASH. R. Woodruff, under direction of F. I. Scoular, No. Texas State Teachers Coll. (Master's Thesis 1941). Accepted for publ. in Food Research. Thesis on file North Texas State Teachers Coll. Library. COMPLETED

The vitamin C content of Early White Bush and Yellow Crookneck squash was determined by the assay method of Bessey and King. Both varieties were found to contain 29 mg. of the vitamin per 100 gm. of fresh squash. The cooked squash contained the following amounts: boiled 10 min., 17 mg. per 100 g.; boiled 30 min., 14 mg.; baked 20 min., 10 mg.: and boiled and sautéed, 7 mg. per 100 g.

FOODS

Composition and Nutritive Value (Continued) Ascorbic Acid (Continued)

THE DETERMINATION OF VITAMIN C IN NINE VARIETIES OF RAW AND COOKED SWEET POTATOES. D. Eakle, under direction of F. I. Scoular, No. Texas State Teachers Coll. (Master's Thesis 1942). IN PROGRESS

Nine varieties of Texas-grown sweet potatoes, obtained from the Gilmer Experiment Station, were analyzed for ascorbic acid content by the Bessey and King method as modified by Mack and Tressler. Since the sweet potato forms a large part of the diets of many Texans, it is important to know whether or not cooked sweet potatoes contribute to the total vitamin C required by humans.

THE ASCORBIC ACID CONTENT OF TOMATOES. L. Ascham, Ga. Expt. Sta. (Professional). (Part of the larger project, The Ascorbic Acid Content of Southern-grown Fruits and Vegetables). Probable date of completion June 1942. Reported in Notes on Research No. 6, p. 18, 1941. IN PROGRESS

Tomatoes were grown in a factorial designed experiment with all possible combinations of four fertilizer treatments: N, P, K, and Ca. The ascorbic acid content of these tomatoes has been determined. Variations in soil type and fertilizer treatments affect the vitamin C content of tomatoes.

VITAMIN C (ASCORBIC ACID) VALUE OF TOMATOES. A. P. Brown and F. Moser, Utah Agr. Expt. Sta. (Professional). Probable date of completion, end of 1942 season. Reported in Notes on Research No. 6, p. 20, 1941. IN PROGRESS

Owing to an unfavorable season it was possible to investigate ascorbic acid values of only 13 varieties of tomatoes. Ten of these were included in the lot studied in 1940. In all but one variety the 1941 averages were higher; the difference ranged from 2.3 to 5.8 mgms. per 100 gms. The difference between varieties were no greater than have been found within one variety grown under varying conditions.

A progress report on the first three seasons' work on this project was published in Food Research 6 (1941) pp. 45-55.

THE EFFECT OF PHOSPHORUS, POTASSIUM, AND NITROGEN FERTILIZERS ON THE ASCORBIC ACID CONTENT OF TOMATOES. L. R. Hornstein. E. O. Keiles, Bur, Home Econ., U.S.D.A., adviser. (Professional). (Part of a larger project, Investigation of the Nutritive Value of Foods). Coop.: Bureau Plant Industry, U.S.D.A. COMPLETED

Ascorbic acid determinations were made of tomatoes grown in the greenhouse in a three level factorial design of nitrogen, phosphorus, and potassium experiment. No significant relationship between nitrogen, phosphorus, and potassium and the ascorbic acid content of tomatoes was observed in this experiment.

FOODS

Composition and Nutritive Value (Continued)

Ascorbic acid (Continued)

VARIATION IN THE COMPOSITION AND NUTRITIVE VALUE OF VEGETABLES IN OKLAHOMA. R. Reder. (Agr. Chem.) Okla. Expt. Sta. (Professional). (Part of larger project, Variation in the Composition and Nutritive Value of Vegetables Grown in the South). Coop.: Regional Cooperative, South-- (Ga. and Va.). Submitted for publ. in Jour. Agr. Res. COMPLETED

This was a study of the effect of fertilizer treatment and environmental factors on the ascorbic acid content of turnip greens produced at four locations by uniform methods of planting and fertilizing. A factorial design was used for applications of N, P, K, and Ca in all possible combinations at a high and low level for each nutrient (16 treatments). Seed of the Seven Tops variety was supplied from a single source. Meteorological data were recorded for each experiment and soil samples from each area were analyzed. Certain of the fertilizer treatments produced significant effects on the ascorbic acid content of the greens. Wide variations were obtained in the ascorbic acid content of greens produced at the four places. The influence of place was much greater than the most important effect produced by fertilizer treatment. The results appeared to indicate that the formation of ascorbic acid was influenced by light intensity and rainfall (and perhaps season) as well as by fertilizer application.

THE ASCORBIC ACID CONTENT OF TURNIP GREENS. L. Ascham, Ga. Expt. Sta. (Professional). (Part of larger project, The Ascorbic Acid Content of Southern-Grown Fruits and Vegetables). Probable date of completion, June 1942. Reported in Notes on Research No. 6, p. 19, 1941. IN PROGRESS

As a part of the study on the effect of environmental factors on the ascorbic acid content of turnip greens, the effect of light intensity has been studied.

FOODS

Preparation

Batters, doughs and cereals

A STUDY OF THE PROBLEMS INCIDENT TO THE ENRICHMENT OF YEAST BREAD BY THE ADDITION OF WHFAT GERM. M. McDivitt, under direction of J. Outhouse and F. Van Duyne, Univ. Ill. (Master's Thesis)

COMPLETED

The quantity of wheat germ which could be incorporated into yeast bread was determined by the standard method for making and scoring breads prescribed by the American Assoc. of Official Agricultural Chemists. An accepted loaf could not be prepared if more than 5.5% of flaked raw wheat germ was added, but by treatment of the germ with moist heat 8.5% and by inclusion of a small amount of gluten 11% could be added.

VITAMIN-RICH BAKED PRODUCTS. R. E. Carr. M. Dye, Mich. State Coll., adviser (Professional). Published as Mich Sta. Circ. 178 (1941) pp. 15.

COMPLETED

Simple practical recipes were developed for the fortification of breads, cakes and cookies, with the vitamins of the B complex. The substances used for increasing the vitamin content were debittered and refined dry brewers yeast and wheat germ. The recipes were developed by adding varying amounts of the yeast or wheat germ to basic recipes and judging the structure and flavor of the finished product. The results indicate that dry brewers yeast and wheat germ can be used successfully in breads, cakes and cookies as a means of increasing their content of the vitamin "B complex". This investigation is significant to the extent that it is a supplementary method of increasing certain vitamins in the daily diet by means of natural foods and at minimum cost.

CONSUMER PREFERENCES FOR WHOLE WHEAT BREADS OF VARYING COMPOSITION AND QUALITY. V. J. Schmidt, under direction of S. Woodruff, Univ. Iowa (Master's Thesis 1942).

IN PROGRESS

The study of whole wheat bread is to determine what qualities are essential to satisfy consumer's taste for bread and be of great nutritional value to the consumer. Bread is baked to use varying kinds and amounts of ingredients and to use different methods of combining them. A number of consumers judge the bread to decide which is liked best.

THE REASONS FOR THE POORER BAKING QUALITY OF WHOLE WHEAT FLOUR. E. Cavert, under direction of C. Personius and M. Johnson, Univ. Wis. (Master's Thesis 1943). Jointly directed by Dept. of Home Econ. and Biochem.

IN PROGRESS

This study was undertaken to find an explanation for the inferior baking quality of whole wheat flour compared with white flour in the belief that such information will suggest ways of improving the baking quality of the whole wheat flour. Yeast breads are made using white flour with varying proportions of wheat germ and bran incorporated. In some tests the bran and germ are subjected to special treatments before incorporation. Objective methods for measuring bread quality are being developed. The proportion and kind of material incorporated in a white flour yeast bread affect the quality of the product.

FOODS

Preparation (Continued)

Batters, doughs and cereals (Continued)

IMPROVEMENT OF SOFT RED WINTER WHEAT IN MISSOURI. F. Bowman. J. M. Poehlman, Univ. Missouri, Adviser (Professional). Part of larger project, Improvement of Soft Red Winter Wheat in Missouri). Cooperative with Dept. of Field Crops. IN PROGRESS

The quality of flours from new varieties of wheat, the special utility of ones from representative varieties of soft red winter wheat, and the effect of known environmental factors upon flour composition and adaptability to different culinary processes are being studied.

THE EVALUATION OF THE FACTORS THAT DETERMINE COOKING QUALITY OF DURUM WHEAT PRODUCTS. D. Knowles. R. H. Harris, N. Dak. Agr. Expt. Sta., Adviser (Professional). (Part of larger project, Durum Wheats with Respect to their Commercial Utilization). Reported in Notes on Research No. 6, p. 28, 1941. Cooperative with Dept. of Cereal Technol. IN PROGRESS

Analytical and cooking quality data have been collected for varieties of Durum grown at Fargo and Langdon in the 1939 and 1940 crop years. Investigations are being conducted on the effect of blight and other forms of damage on the cooking quality of the macaroni.

A STUDY OF THE CONSISTENCY OF STARCH GELS PREPARED AT A HIGH ALTITUDE. J. T. Chase, under direction of J. E. Richardson, Mont. State Coll. (Master's Thesis 1942). (Part of larger project, A Study of Qualities and Uses of White Wheat Varieties Raised in Montana). IN PROGRESS

The optimum proportions, temperature and time of cooking are being determined for starch gels at a high altitude. The gels, containing flour and cornstarch as thickening agents and including food materials such as sugars, salts, milk, and fruit acids, are being prepared according to a method developed experimentally and tested by means of a jelly strength tester (Tarr and Baker, 1926).

MEASUREMENT OF THE STRENGTH OF GELATINIZED STARCH GELS MADE FROM STARCH OF THE DIFFERENT WHEAT VARIETIES. D. Knowles. R. H. Harris, N. Dak. Agr. Expt. Sta., Adviser (Professional). (Part of larger project, A Comparative Study of Certain Physical and Chemical Properties of Starch Prepared from Different Wheat Varieties). Cooperative with Dept. Cereal Technol. Reported in Notes on Research No. 6, p. 26, 1941. IN PROGRESS

FOODS

Preparation (Continued)

Batters, doughs and cereals(Continued)

Starches are being prepared from different classes and varieties of wheat by the method of Dill and Alsberg (1924). The amyloextrin fraction is being included in order that the relationship between gel strength and baking strength may be studied. Experimental starches and a standard gluten are being made into synthetic doughs by a modification of the method of Sandstedt et al (1939). No relationship is evident between baking strength and gel strength. The range in gel strength of varieties within the hard red winter and hard red spring classes indicates varietal differences. There is evidence that soft wheat starches tend to have lower gel strengths than hard wheat starches. The amyloextrin fraction appears to have a definite weakening effect on the starch gel, regardless of variety or class. This weakening effect varies widely from class to class. Eleven varieties of the hard red spring wheats were grown under comparable conditions in four different regions of the state in the 1940 crop year. The starches of the wheats grown at Fargo have stronger gel strengths than starches of similar wheats grown in other localities. The Landgon wheats have the weakest starch gels.

STUDIES ON THE PHYSICAL PROPERTIES OF POTATO STARCHES. E. A. Grawemeyer and A. M. Briant. A. M. Briant, N. Y. State Coll. Home Econ., Cornell Univ., Adviser (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables). On file N. Y. State Coll. Home Econ., Cornell Univ. Reported in Notes on Research No. 6, p. 53, 1941.

COMPLETED

The effect of growing season on certain physical properties of potato starches and the relationship of these properties to mealiness were studied. Starches from 11 lots of tubers, each grown in 1939 and 1940, were examined for temperatures of break in heating curve and of first and complete loss of anisotropy, and for particle size distribution, starch pastes were examined for rigidity, penetration force and viscosity. With few exceptions these properties varied for the same sample for different years. Correlation coefficients between mealiness and each of the physical properties indicated, in most instances, an association.

THE DEVELOPMENT AND STANDARDIZATION OF BREAD RECIPES FOR USE WITH GRAIN SORGHUM FLOURS. N. D. Bavousett and E. Kleppe. J. McCrery, Texas Technol. Coll., Adviser (Professional). On file Dept. Foods & Nutr., Texas Technol. Coll.

COMPLETED

Recipes were developed for quick and yeast breads in which the sorghum flours, kafir, milo maize and hegira were substituted for wheat flour. Standard recipes were used as a basis for the experimentation, and the proportions of sorghum flours, fat, sugar, and leavening were adjusted until an acceptable product was obtained. Each of these flours can be substituted in part and some in whole for wheat flour in muffins, biscuit, and yeast breads. Since these grains are grown abundantly in the South Plains area, the use of these flours would be an economic advantage.

FOODS

Preparation (Continued)

Batters, Doughs and cereals (Continued)

A COMPARISON ^{OF} ANGEL FOOD CAKES MADE OF FRESH BROKEN AND FROZEN EGG WHITES. L. Miller under direction of G. E. Vail, Kans. State Coll., (Master's Thesis). On file Library, Kans. State Coll. Reported in Notes on Research No. 6, p. 28, 1941. COMPLETED

The best temperature for beating certain types of egg whites, the edible quality of angel food cakes made from fresh and frozen egg whites, and the best baking temperature for cakes made from the different egg whites were determined. A beginning beating temperature of 70° F. was found to be the most desirable of those used. Oven temperatures of 400° F. and 425° F. were found to give highly satisfactory results. Special frozen egg whites gave angel food cakes of more uniform high quality than did either the regular frozen whites or the fresh eggs.

THE VISCOSITY OF CAKE BATTERS IN RELATION TO INDICES OF CAKE QUALITY. M. T. Swickard, under direction of G. L. Sunderlin, Purdue Univ., (Master's Thesis 1941). Abstract publ. in Jour. Home Econ., 33, p. 596, Research No. 6, p. 29, 1941. COMPLETED

In order to see if viscosity of cake batters is related to cake quality 50 cakes mixed by five methods chosen to give batters of high viscosity were compared with 50 cakes mixed by five methods chosen to give batters of low viscosity. There was a definite and direct relationship between batter viscosity and each of the measured indices of cake quality with the cakes mixed by eight of the ten methods. However, with the other two methods, cake quality was inversely related to viscosity.

THE USE OF PEANUTS AND PEANUT PRODUCTS IN FOOD PREPARATION. L. Aschem, Georgia Expt. Sta. (Professional). Probable date of completion June 1943. IN PROGRESS

The use of peanut products, especially peanut butter, in breads, cakes, and pastries has been studied. Peanut butter can be substituted successfully for shortening in all of the products worked upon.

A STUDY OF THE EFFECT OF DIFFERENT DEGREES OF MILLING UPON THE FOOD VALUE AND KEEPING QUALITY OF RICE. S. R. Henderson. H. J. Davis, La. State Univ., adviser (Professional). Probable date of completion 1944. IN PROGRESS

In order to determine the degree of milling that will prevent rancidity and minimize the loss of vitamin B₁, samples of rice milled to different degrees were obtained from several rice mills and analyzed for vitamin B₁ content. These samples were stored under warehouse conditions and are being checked at regular intervals for the development of rancidity. Thus far no differences have developed in the keeping quality (rancidity) of any of the samples.

FOODS

Preparation (Continued)

Batters, doughs and cereals (Continued)

STUDIES ON THE USE OF RICE BY-PRODUCTS IN COOKERY. M. E. Hollinger. H. J. Davis, La. State Univ., adviser (Professional). Probable date of completion 1942. IN PROGRESS

Standard recipes were modified so as to include from twenty-five to thirty-three per cent of rice polishings in the place of a comparable amount of wheat flour, and mimeographed circular has been published in which nineteen such recipes are given. These recipes are being tested by various groups who have been requested to submit suggestions and criticisms. Another more elaborate publication will be released later in which will be incorporated the various suggestions received concerning the above recipes, together with additional data on the stability of vitamin B₁ in rice polishings when cooked by various methods.

A STUDY OF RANCIDITY IN THE BY-PRODUCTS OF RICE AND METHODS OF PREVENTING IT. S. R. Henderson. H. J. Davis, La. State Univ., adviser (Professional). Probable date of completion 1944. IN PROGRESS

A large quantity of rice bran and rice polish was packaged in various types of containers and with numerous anti-oxidants in an effort to determine the cause or causes of rancidity. A total of thirty-three series of treatments were applied to brown rice and the by-products of rice. A sufficient quantity of each of these products was packaged so that one container can be opened and studied each thirty days for the next twelve or eighteen months. This experiment is in its third month at the present time. The samples studied during the first sixty days of the experiment show that rancidity had not developed in any of the samples.

Fruits and Vegetables

THE EFFECT OF PREPARATION METHODS ON THE COLOR OF FOOD. R. M. Griswold. M. Dye, Mich. State Coll., adviser (Professional). Probable date of completion 1944. IN PROGRESS

The effect of canning methods on the color and palatability of Montmorency cherries, the location of the anthocyanin in the tissues of raw and canned cherries, and the effect of various factors on the color and palatability of applesauce are being studied.

"SOFTENING" OF APPLES. M. J. Cox and F. O. Van Duyne. J. I. Simpson, Univ. Ill., adviser (Professional). (Part of larger project, Hemicelluloses and "softening" of vegetables and fruits). IN PROGRESS

Six varieties of apples are being studied to determine the changes that occur during storage and cooking. Raw and cooked apples are stained and examined microscopically for different pectin fractions. Amounts of pectin fractions, hemicelluloses, and cellulose present are being determined chemically.

FOODS

Preparation (Continued)

Fruits and vegetables (Continued)

USE OF THE DRIED SWEET POTATO. L. Neal. B. Finkelstein, Ala. Polytech. Inst., adviser (professional). IN PROGRESS

This study involves the preparation of foods using the dried white and yellow sweet potato, but the specific procedure has not been decided upon as no satisfactory method for eliminating the extreme starchy taste of the white sweet potato or the extreme "sugary" taste of the yellow sweet potato has been obtained.

FACTORS IN PRODUCTION, PRESERVATION AND PREPARATION AFFECTING THE VITAMIN AND MINERAL CONTENT OF FOOD. M. Haberly, under direction of J.I. Rowntree, Univ. Washington. (Master's Thesis 1941). On file Univ. Washington Library. COMPLETED

The literature on the causes of variation in the composition of foods and on the losses incurred in handling, processing and cooking was reviewed.

Vegetables, fruits and grains vary in mineral and vitamin content with the variety, degree of maturity. The iodine content of eggs and riboflavin of milk are changed by foods given. Temperature, humidity and exposure to air after harvest have the greatest effect on vitamin content. Soaking pared vegetables in cold water, cutting in small pieces, delay in reaching boiling temperature during cooking, unduly long cooking, failure to use vegetable water, all result in large losses of vitamins B ~~and~~ C. ^{and}

PALATABILITY OF GREEN LEAFY VEGETABLES COOKED IN WATER FROM VARIOUS REGIONS OF OKLAHOMA. B. F. Newkirk, under direction of W. Armstrong, Okla. A. and M. Coll., (Master's Thesis 1942). (Part of larger project, The Palatability and Nutritive Value of Green Leafy Vegetables Cooked in Waters from Various Regions of Oklahoma (under consideration). IN PROGRESS

The effect of the chemical composition of the water used for cooking upon the palatability of green leafy vegetables is being determined. Waters with high and low content of bicarbonate, with high and low content of calcium and with high and low content of total minerals from various areas of Oklahoma are being used. The vegetables are cooked by standard methods and the palatability scored by a panel of trained judges. The following factors are considered in judging palatability: texture, flavor, degree of disintegration, color and tenderness. Scores on tenderness are compared with penetrometer readings.

FOODS

Preparation (Continued)
Meats

INVESTIGATIONS OF THE PRINCIPLES AND METHODS OF FOOD PREPARATION: DEVELOPMENT OF HOUSEHOLD COOKING METHODS BEST ADAPTED TO CONSERVING FOOD VALUE AND BRINGING OUT THE BEST QUALITIES IN THE DIFFERENT KINDS AND GRADES OF MEAT. L. M. Alexander and J. C. Lamb, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Cooperative Meat Investigations). Submitted for publication as Farmers' Bulletin. COMPLETED

To help the housewife to invest her meat dollar wisely and cook meat so as to get the good from every pound purchased in the market or grown on the farm, previous experiments were continued on the cooking of the less-demanded cuts of beef, pork, veal, and lamb. Special attention was given to the preparation of meat organs because of their exceptionally high food value. Recipes based on the results of these experiments were included in a Farmers' Bulletin, which is a revision and enlargement of Miscellaneous Publication 216, "Meat dishes at low cost," published in 1934.

INVESTIGATIONS OF THE PRINCIPLES AND METHODS OF FOOD PREPARATION: DEVELOPMENT OF HOUSEHOLD COOKING METHODS BEST ADAPTED TO CONSERVING FOOD VALUE AND BRINGING OUT THE BEST QUALITIES IN THE DIFFERENT KINDS AND GRADES OF MEAT. L. M. Alexander, M. B. Porter, J. C. Lamb, and (O.G. Hankins, B.A.I.). Bur. Home Econ., U.S.D.A., (Professional). (Part of larger project, Cooperative Meat Investigations. Bureau of Animal Industry furnishes meat). IN PROGRESS

To compare draftless with ventilated electric ovens for the roasting of meat, paired cuts of meat are cooked, one of each pair in an oven having the vents open and the other in a similar oven with the vents closed. Cooking time and fuel requirements, losses of meat during cooking, and palatability of the meat roasted in these two ways are compared. Results of this type of study of cooking method are of value to manufacturers of cooking equipment.

COMPARATIVE COOKING TIME AND TENDERNESS OF MEAT COOKED IN WATER AND IN AN OVEN OF THE SAME TEMPERATURE. S. Cover, Tex. Agr. Expt. Sta. (Professional). (Part of larger project, The Chemical and Physical Factors Responsible for Tendering Meat During Cooking). Publ. in Jour. Home Econ. 33, (596) 1941. COMPLETED

Paired top-round and paired bottom-round roasts were cooked - one as a roast in electric oven, the other submerged in water in a large water bath. For each, the cooking temperature was held constant at 90° C. and the roasts were removed at an internal temperature of 80° C. Results obtained by the paired-eating method, a scale of weighted adjectives, and the mechanical shearing device showed that the oven cooked roasts were much more tender. Cooking times for the two cuts respectively were 2.4, 1.9 hours in the water and 31.8, 26.4 hours in the oven.

FOODS

Preparation (Continued)

Meats (Continued)

EFFECT OF METAL SKEWERS ON COOKING TIME AND TENDERNESS OF BEEF. S. Cover, Tex. Agr. Expt. Sta. (Professional). (Part of larger project, Effect of Time and Temperature on Tenderness of Meat. Publ. in Food Research 6, pp. 233-238, 1941. COMPLETED

Paired round, arm-bone chuck, and standing rib roasts of beef were cooked well-done at the same oven temperature (125° C.), one with and the other without skewers. Tests for tenderness were made by the paired-eating method. The skewers decreased the cooking time and cooking losses but increased the toughness of the three cuts of beef used in this experiment. This undesirable effect on tenderness seemed to be greatest when the effect on cooking time was greatest and least when the difference in cooking time was least.

THE EFFECT OF PROCESSING METHODS ON THE THIAMIN CONTENT OF PORK. E. Ducie, under direction of J. McIntosh, Wash. State Coll. (Master's Thesis 1943). (Part of larger project, Factors Affecting the Vitamins D and B Content of Meat. Coop. Animal Husbandry and Dairy Depts.). Probable date of completion June 1943. IN PROGRESS

The effect of cooking, curing and home canning on the thiamin content of pork will be determined. The pork will be of known thiamin content. Different methods of assay, chemical, bacteriological and biological are to be used.

THE EFFECT OF THREE TEMPERATURES OF THAWING UPON CERTAIN CHARACTERISTICS OF COOKED FROZEN PORK. M. Jeffries, under the direction of G. E. Vail, Kans. State Coll. (Master's Thesis 1942). (Part of larger project, Meat Investigations). IN PROGRESS

The effect is being determined upon the shear, press fluid, moisture content and percentage cooking losses of thawing frozen pork as follows: (a) room temperature; (b) refrigerator temperature; and (c) oven temperature of 350° F. Six pairs of roasts were cut from each of eight pork loins of known history. They were frozen at -10° F. to -15° F. and stored at 0° F. until ready to be thawed.

Milk products

SOME COOKING QUALITIES OF HOMOGENIZED MILK. I. BAKED AND SOFT CUSTARDS. R. E. Carr and G. M. Trout. M. Dye, Mich. State Coll., adviser (Professional). Coop with Dairy Husbandry Dept. Accepted for publ. by Food Research. COMPLETED

Objective and subjective tests were used to compare the quality of baked and soft custards made from homogenized and unhomogenized milk. The objective tests used for baked custards were: rate of heat penetration by means of time-temperature scale, standing index, amount of syneresis on standing and firmness of custard as measured by curd tension meter. The objective test on soft custards was viscosity measurements as determined by MacMichael viscosimeter. The judges' score sheets for all custards included the factors of sweetness, texture, color and firmness. Findings indicated that baked and soft custards made with homogenized milk were superior in quality to those made with unhomogenized milk.

FOODS

Preparation (Continued)

Milk products (Continued)

EFFECT OF HEAT ON SOME PHYSICAL AND CHEMICAL PROPERTIES OF SEMI-HARD AND HARD CHEESES. A. Rodgers, under direction of C. Personius, Univ. Wisc. (Master's Thesis 1943). Coop. Dept. Dairy Industry. Reported in Notes on Research No. 6, p. 41, 1941. IN PROGRESS

This study was undertaken to investigate the conditions that produce undesirable changes in cheese during cooking and to study the qualities that make a cheese best suited for use in cooking. Cheddar cheeses varying in composition and age are tested. Acidity, moisture, fat and nitrogen determinations are made as well as observations on the melting and blending properties of the samples. Differences between various samples are found.

AN INVESTIGATION OF THE ACTIVE FOAMING SUBSTANCE IN SKIM MILK AND WHEYS. D. U. Grundy, under direction of B. M. Watts, Univ. Cal. (Master's Thesis 1941). On file Univ. Cal. Library, Berkeley, Cal. COMPLETED

Utilization of wheys and skim milk for human consumption was believed important on the basis of the nutritional value of these waste products. The skim milk and wheys were subjected to numerous chemical and physical treatments in an effort to develop a stable foam from these products which could be substituted for similar egg white whips. $\text{Ca}(\text{OH})_2$ added in 1 to 20 ratio to alcohol-extracted whey and skim milk gave excellent whips when the dried material was made up in 10% solutions. When these solutions were preheated to 60° C. before whipping, stable foams were formed which were successfully incorporated into meringue, boiled and uncooked icings, and other similar products. Under present emergency conditions, successful employment of dried waste products in foods will be of primary importance.

Eggs

UTILIZATION, CHEMICAL NATURE, AND NUTRITIVE VALUE OF DRIED EGGS. D. E. Shank, M. Potgieter, J. Lorr, J. Lynn, B. Carlson, Bur. Home Econ. U.S.D.A. (Professional). (Part of larger project, Emergency Dehydration Project). Coop. with Bur. Agr. Chem. and Eng., U.S.D.A. IN PROGRESS

Dried eggs from various commercial producers are being tested for palatability, usability in household recipes and in special diets, storage properties, chemical and physical nature, and nutritive value. Whole dried egg and dried egg-yolk samples (before and after storage) will be tested in household and in special recipes, studied chemically for the effects of dehydration and of subsequent storage on the proteins and fats of the egg, and fed to rats and/or human subjects to determine their relative nutritive value as compared with that of fresh eggs and egg yolk.

FOODS

Preparation (Continued)

Eggs (Continued)

UTILIZATION OF DRIED EGGS AND DRIED EGG YOLKS IN INFANTS' AND OTHER SPECIAL DIETS. M. Potgieter, Bur Home Econ., U.S.D.A. (Professional). (Part of larger project, Utilization, Chemical Nature, and Nutritive Value of Dried Eggs). IN PROGRESS

Recipes for the Utilization of dried eggs and yolks in infants' and other special diets, the digestive tolerance of well babies for dried eggs and yolks, the effect of various factors on the reconstitutability of dried eggs, and the optimum cooking time and temperature are being studied. Clinical feeding experiments will be conducted with well babies, to determine their reactions to dried eggs or dried yolks, as reflected in general health, digestion and hemoglobin level. Dried yolk is much more satisfactory than dried whole egg in liquid and soft diets, because of the cooking time and temperature required to insure destruction of all bacteria. These findings will be significant in the use of dried eggs for infants and in hospitals, in Hawaii and in England.

CERTAIN FACTORS INFLUENCING THE STABILITY OF SOFT MERINGUES. E. M. Gertz. N. K. Fitch, Teachers' College, Columbia Univ., adviser (Professional). Probable date of completion December 1942. IN PROGRESS

The factors which influence the stability of soft meringues are being determined in order to obtain a meringue which gives a minimum amount of leakage. The general procedure involves the use of a composite sample of a large number of egg whites; the standardization of beating procedure by the use of a rotary type mechanical beater, controlled baking temperatures; the testing of one variable factor at a time; and controlled judging methods. Among the variable factors being tested are recipe, beating time, baking temperature, hydrogen ion concentration.

Preservation

Canning and jelly-making

PROCESSING OF CANNED MEAT. S. Cover, H. Schmidt, and R. D. Turk, Tex. Agr. Expt. Sta. (Professional). Coop. with Div. of Vet. Science, Texas A. and M. College. reported in Notes on Research No. 5, p. 38, 1940
IN PROGRESS

Results based on calculations from the heating curves and verified by inoculation tests have shown that 50 minutes processing at 15 pounds pressure is sufficient to destroy the botulinus organism in No. 2 cans of ground meat. Inoculation tests with No. 3 cans are now in progress. For the tests using 10 pounds pressure the heating curves have been made but calculations and inoculation tests have not been completed. Preliminary work with a canned luncheon meat has been started.

FOODS

Preservation (Continued)

Canning and jelly-making (continued)

THE CHEMICAL AND PHYSICAL CHARACTERISTICS OF ARKANSAS PEACHES IN RELATION TO QUALITY IN THE CANNED PRODUCT. H. Reynolds, Univ. of Ark. (Professional). Coop. with J. R. Cooper, Dept. Hort. and Forestry. Probable date of completion 1942. Reported in Notes on Research No. 5, p. 46, 1940. IN PROGRESS

To determine the relative canning quality of Arkansas grown peaches, canning tests, with a number of varieties, have been carried out in conjunction with chemical analyses. Quality ratings of canned samples on the basis of color, texture, flavor, general appearance, and aroma, placed the varieties studied in three groups. St. John, Belle of Georgia, Fair Beauty, and Mamie Ross were rated as poor or unsatisfactory with respect to all or a majority of the above criteria. A second group, including Elberta Cling, Rochester, Crawford's Early, Golden Jubilee, and Fertile Hale yielded canned products which were generally fair or acceptable though deficient in one or more desirable characteristics. Chilow and Elberta were the varieties yielding the most satisfactory canned products. Golden Elberta, Ideal, Anabel, and Leona also gave canned products which were good or satisfactory. With Elbertas, no significant relation between fertilization practices and fruit composition or quality in the canned product could be discovered.

THE RELATION BETWEEN VISCOSITY AND SUGAR-SUPPORTING CAPACITY OF APPLE EXTRACTS. I. T. Noble and J. E. Corser, Univ. Minn. (Professional). (Part of larger project, Culinary Quality and Utilization of Minnesota Fruits). Reported in Notes on Research No. 6, p. 50, 1941. IN PROGRESS

The relationship between the viscosity of apple extracts and the amount of sugar required by each to yield a good jelly is being studied. The results collected so far show that the same curve does not express the relationship for all of the varieties studied, but they indicate that the relationship is the same for the 1941 as for the 1940 crop. Viscosity and pH of extracts prepared by the same method are not the same for the 1941 as for the 1940 crop, however.

FOODS

Preservation (Continued)

Frozen Storage

THE EFFECT OF PRECOOKING UPON THE PALATABILITY OF PORK ^{Roasts} ~~ROASTS~~ PRESERVED BY FREEZING. I. T. Noble and F. M. Hardy, Univ. Minn. (Professional) (Part of larger project, A Study of the Qualities of Meat which Affect its Palatability, Methods of Cooking, and Utilization). IN PROGRESS

The rate of deterioration of precooked and raw pairs of pork loin roasts, frozen at 0° F. and held at 0 or 15° F for varying periods to a maximum of 12 weeks is being followed by means of the Cooperative Meat Investigation score sheet and determinations of press-fluid, freezing-drip, loss in weight, and the peroxide values of the fat.

THE EFFECT OF STORAGE ON THE QUALITY OF FROZEN PORK AS JUDGED BY PALATABILITY, MECHANICAL AND CHEMICAL TESTS. E. Young, under direction of J. McIntosh, Wash. State Coll. (Master's Thesis 1942). IN PROGRESS

The effect of storage upon the quality of frozen pork judged by palatability, mechanical, and chemical tests is being investigated. Chops, roasts, and sausage from three carcasses are being tested at six-week intervals following freezing and storage at 0° F. Results to date show greater storage and cooking losses with longer periods of storage but very small differences in the palatability judged subjectively.

PROCESSING OF MEAT FOR FREEZER LOCKER STORAGE. M. J. Cox and F. O. Van Dwyne. J. I. Simpson, Univ. Ill., adviser (Professional). Coop. with S. Bull, Animal Husbandry. IN PROGRESS

Pork loin roasts are wrapped in waxed locker paper or in cellophane. They are frozen in a sharp freezer with little air circulation, in a sharp freezer equipped with an air blast, or on plates. After freezer storage the amount of shrinkage is determined, the amount of freezer burn is noticed, and the products are judged subjectively for flavor and odor. Photomicrographs are taken to determine the effect of the different freezing processes on the tissue structure.

THE PALATIBILITY, COOKING LOSSES, AND TENDERNESS OF FROZEN PORK. R Jordan and O. D. Milligan, Purdue Univ. (Professional). (Part of larger project, A study of the Chemical and Physical Changes in Meat During Freezing and Storage). Coop. with Animal Husbandry and Agr. Chem. Depts. To be publ. as part of an Experiment Station Bulletin. Reported in Notes on Research No. 6, p. 42, 1941. COMPLETED

For purpose and methods of procedure see previous Notes on Research. Under the conditions of freezing and storage used in this study the pork cuts were still edible after 16 months storage. There seemed to be no important difference in tenderness (as measured by the Warner-Bratzler shear test) which could be attributed solely to freezing and storage. There seemed to be no correlation between percentage of cooking losses and the length of the storage period.

FOODS

Preservation (Continued)

Frozen storage (Continued)

A STUDY OF THE PALATABILITY, COOKING LOSSES, AND TENDERNESS OF FROZEN BEEF. R. Jordan and O. D. Milligen, Purdue Univ. (Professional). (Part of larger project, A Study of the Chemical and Physical Changes in Meat During Freezing and Storage and During Storage in the Unfrozen State.) Coop. with Depts. of Animal Husbandry and Agr. Chemistry). Probable date of completion 1944. Reported in Notes on Research No. 6, p. 43, 1941.
IN PROGRESS

For purpose and general procedure see previous Notes on Research. The samples examined thus far have been found to be in satisfactory condition even after 15 months of storage.

INFLUENCE OF FREEZING ON TENDERNESS IN "AGED" BEEF. R. V. Bray and G.E. Vail, under direction of D. L. Mackintosh, Kans. State Coll. (Master's Thesis). (Part of larger project, Meat Investigations). Coop. with Dept. of Animal Husbandry. Publ. in Trans. Kans. Acad. Sci. 44, pp. 327-331 (1941)
COMPLETED

Two carcasses graded "good" and two graded "medium" were aged for 32 and 42 days respectively. Steaks one and one-half inches thick were cut from the boned short loins. One half of the steaks were frozen at -10° to -15° F. The other half, used as controls, were cooked without freezing. The results indicated little or no change in tenderness of "aged" beef due to freezing; however, indications were that this may vary with the animal.

PRESERVATION OF MEATS AND POULTRY IN FROZEN-FOOD LOCKERS. L. H. Blakeslee, J. A. Davidson, R. M. Griswold, Mich. State Coll. Coop. with Animal Husbandry and Poultry Husbandry Depts. Publ. As Mich. Ext. Bull. 223, Feb. 1942.
COMPLETED

Directions are given for preparing meat, poultry, game and fish for frozen-food lockers, and for cooking frozen meat.

QUICK FREEZING AND REFRIGERATION OF FARM PRODUCE. G. M. Redfield, Purdue Univ. (Professional). Coop. with Agr. Eng. Dept. IN PROGRESS

Four fruits, four vegetables, and three meats have been frozen and stored in three individual farm freezing units and in a commercial locker plant. The products are scored subjectively at the end of each month of storage. In two of the freezing units and the locker plant the products are still satisfactory after six to eight months of storage. In the third unit most of the products are definitely inferior. Records are also being obtained on energy consumption and storage of food products in farm freezing units in use in the state.

Preservation (Continued)

Frozen storage (Continued)

FREEZING OF FRUITS AND VEGETABLES. M. J. Cox and F. O. Van Duyne. J. I. Simpson, Univ. Ill., adviser (Professional). (Part of larger project, Home Preservation of Food). Coop. with B. S. Weaver, Dept. of Horticulture and F. W. Tanner, Bacteriology. IN PROGRESS

Numerous fruits and vegetables are being prepared for freezing by different methods and being frozen and stored in two types of lockers. In some cases many varieties are being studied--fifteen of corn, eight of peas, fourteen of snapbeans, and peaches from twenty-seven seedlings. After freezer storage the products are tested subjectively to determine the effect of variety and method on flavor, color, and texture. Photomicrographs are taken to determine the effect of the processes on tissue structure.

REFRIGERATED LOCKER STORAGE OF FRUITS AND VEGETABLES. M. Kellogg, So. Dak. State Coll. (Professional). Coop. with S. A. McCrory, Hort. Dept. Reported in Notes on Research No. 6, pp. 46-47, 1941. IN PROGRESS

The study reported in Notes on Research No. 6, pages 46-47, has been extended and the foods now being tested are peas, spinach and other greens, carrots, asparagus, green and wax beans, summer squash, corn, rhubarb, plums, and apricots. The data which have been analyzed so far for the 1940 frozen foods indicate that of the three varieties of rhubarb, Brandon Blood Red, McDonald, and Ruby, the Ruby was the least desirable at all stages tested. All three varieties of green beans, Plentiful, Bountiful, and Stringless Green Pod, decreased in desirability as length of storage increased. Corn-off-the-cob was more desirable than corn-on-the-cob. There is an indication in some of the products tested that the first picking was superior to the second and third.

SHARP FREEZING OF FRUITS AND VEGETABLES, D. Knowles, No. Dak, Agr. Expt. Sta. (Professional). Coop with O. Grottodden and H. Mattson, Dept. of Horticulture, and E. Long, Dept. of Agr. Eng. Publ. in No. Dak. Bimo. Bul. 3, No. 6, pp. 20-23 (1941). Reported in Notes on Research No. 6, p. 46, 1941. IN PROGRESS

Results of the freezing trials of the 1940 crop year substantiate the results of 1939. Other varieties tested in 1940 that appear to be adapted to freezing are: Sachem and Hiawatha (a new hybrid) varieties of corn; Little Marvel variety of peas; Sure-crop Stringless wax beans; and Henderson Bush, Early Baby Potato and Baby Potato lima beans. Results of the pack studies indicate that corn frozen off-the-cob is consistently better than corn-on-the-cob. Most vegetables have slightly better flavor and color when frozen in a two-percent salt solution. Vegetables frozen in glass containers appear to be slightly superior to those frozen in paperboard containers. It is essential to select paperboard containers that will hold liquid.

FOODS

Preservation (Continued)
Dehydration

RECONSTITUTION, GRADING AND EXPERIMENTAL COOKERY TESTS ON DEHYDRATED MEATS AND VEGETABLES. J. Stillman. B. M. Watts, Univ. California, adviser (Professional). (Part of larger project, Dehydration Preservation of Meats and Vegetables, A. F. Morgan director). Coop. with Div. of Fruit and Veg. Products. Probable date of completion July 1, 1942. IN PROGRESS

The palatability of meats and vegetables dried and stored under various conditions is being studied. Meat (raw and precooked) and vegetables (unblanched and blanched in various ways) are dried in home evaporators and in larger laboratory dehydrators and stored under various conditions. Soaking necessary to reconstitute, rancidity, changes in the fat (meat) and palatability scores are being run on the dried, stored and cooked foods.

QUALITY AND PALATABILITY OF DEHYDRATED VEGETABLES. D. E. Shank, C. Hamblinton, F. Benedict, M. Dooley and M. Vorkoeper, Bur. Home Econ., U.S.D.A. (Part of Emergency Dehydration Project, U.S.D.A.). Coop. with Agr. Expt. Stas. of Cal. and New York (Cornell), and Univ. of Texas. IN PROGRESS

Dehydrated food samples from various dehydration plants in different parts of the country are examined, soaked, and cooked by one or several methods and judged for quality and palatability by a panel of five or more persons, specially chosen for their acuity of taste and smell. These judges score the cooked dehydrated foods for appearance, consistency, odor, flavor, and general acceptability.

THE EFFECT OF SPRAY DRYING AND OF SUBSEQUENT STORAGE ON THE CHEMICAL AND PHYSICAL NATURE OF EGGS AND EGG YOLKS. J. Lorr, B. Carlson and M. Potgieter, Bur. Home Econ. U.S.D.A. (Professional). (Part of larger project, Utilization, Chemical Nature, and Nutritive Value of Dried Eggs). Coop. with Bur. Agr. Chem. and Eng. (on laboratory methods). IN PROGRESS

A quick, objective test for determining the useableness (quality) of various dried eggs on the market is being sought. Tests will be made for solubility (in water and salt solutions) of the protein, for separation of the fat ("creaming"), and for sedimentation, in the reconstituted dried eggs. Findings will be compared with the usability of the same samples in household and special recipes. It would be convenient for dealers to have a simple test which would serve as an indication of the satisfactoriness of the various dried eggs on the market for household and other uses.

Preservation (Continued)
Dehydration (Continued)

THE EFFECT OF STORAGE AT VARIOUS TEMPERATURES, AND FOR VARIOUS LENGTHS OF TIME, ON THE USABILITY OF WHOLE DRIED EGGS IN HOUSEHOLD RECIPES. D. E. Shank and J. Lynn, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Utilization, Chemical Nature, and Nutritive Value of Dried Eggs). Coop. with Bur. Agr. Chem. and Eng. (for the stored egg samples to be tested in recipes). IN PROGRESS

The effect of storage time and temperature on the usability of whole dried eggs in household recipes is being tested. Various dried egg samples are being stored at temperature ranging from 0° to 110° F. These are being tested at various intervals in the following recipes: scrambled eggs, foundation cake, popovers, mayonnaise, and baked custard. One sample stored at 104° F. for two weeks was no longer satisfactory for any recipes except the foundation cake, and no longer satisfactory for cake after 4 weeks' storage at this temperature. It has been found that egg samples vary in their storage properties.

Quality
Eggs

INVESTIGATIONS OF FOOD QUALITY: THE RELATIONSHIP OF EGG FLAVOR AND QUALITY TO CANDLING GRADE OF SHELL TREATED AND NATURAL EGGS IN STORAGE FOR VARYING LENGTHS OF TIME. E. H. Dawson, H. A. Rust, C. W. Knox and H. E. Goresline, Bur Home Econ., U.S.D.A. (Professional). Coop. - Eggs supplied by Agr. Marketing Service and the Bur. Animal Industry, and graded by the Agr. Mktg. Serv. The Bur. Agr. Chem. and Eng. are responsible for the bacteriological examinations (U.S.D.A.). IN PROGRESS

Standards for flavor and quality of eggs are being set up. The eggs are soft-cooked and the yolks are tasted while warm by a committee of 8 judges whose reliability and acuity of taste and smell are determined beforehand. 1,155 eggs of three types, (1) oil dipped, (2) vacuum CO₂ processed, and (3) natural shell, so far have been taste-tested for flavor after 2, 4, and 6 months storage. The quality of raw, broken-out eggs is also measured and bacteriological examinations are made on eggs from the same case and treatment. The results of this study may influence the present method of grading eggs.

FOODS

Quality (Continued)

Eggs (Continued)

PRESERVATION OF SHELL EGGS. E. H. Dawson, T. C. Byerly, L. S. Stuart, H. A. Rust, T. W. Sampson, Bur. Home Econ., U.S.D.A. (Professional). Coop. Eggs of Known history are produced, treated and stored by the Bureau of Animal Industry, graded by the Agricultural Marketing Service, and examined bacteriologically by the Bur. Agr. Chem. and Eng. The investigation is being conducted for the information of Surplus Marketing Admin. (U.S.D.A.) IN PROGRESS

To determine the effects of washing eggs and of various shell treatments, the keeping quality of washed and unwashed eggs, treated and untreated, is studied under various holding conditions. All eggs are graded by candling at the beginning of the experiment and again at the end of the storage period. A 20-egg sample from each lot is broken at the end of the storage period and measured as to internal quality, odor and bacterial or mold contamination. Another 20-egg sample from each lot is used to measure flavor. The results of this research will be used in shipment of eggs abroad.

INVESTIGATION OF QUALITY OF DRIED EGGS. D. E. Shank, E. H. Dawson, M. Potgieter, W. D. Termohlen. L. Stanley, Bur. Home Econ., U.S.D.A., adviser (Professional). Coop.: The investigation was made in co-operation with the Low Temperature Research Station, Cambridge, England, represented by Dr. C. S. Hanes. Samples were secured from drying plants in U.S.A. by the Surplus Marketing Admin, from Canada by A. H. Woodcock of the Natl. Research Council of Canada, and from England by C. S. Hanes. On file Foods & Nutr. Div. BHE., USDA. COMPLETED

To determine the relative quality of dried whole eggs, samples from 58 drying plants were tested for palatability. The eggs were scrambled and rated for quality by a selected panel of 15 judges using the scale of flavor evaluation developed by the British. Samples of dried egg previously rated by a British panel, illustrating different grades in this scale, were used to standardize the judging panel. 45 samples were found to be within the limits of fresh quality, 12 were within the limits of cooking quality, and only 1 sample was rated definitely unpleasant. This information has been used in the purchase of dried eggs for lease-lend by the Surplus Marketing Administration, U.S.D.A.

Fruits and Vegetables

THE CULINARY QUALITY OF POTATOES. E. Feldemeier, E. ^G Mrawemeyer, B. McCreedy, B. Mai and M. Wilde. M. C. Pfund, N. Y. State Coll. of Home Econ., Cornell Univ., adviser. (Professional) (Part of larger project, Quality of New York State Fruits and Vegetables). Coop: Much of the material is furnished and grown under the supervision of staff members of the N. Y. State Coll. of Agric. Reported in Notes on Research No. 6, p. 37, 1941. IN PROGRESS

FOODS

Quality (Continued)

Fruits and Vegetables (Continued)

THE NATURE OF THE DARKENING OF COOKED POTATOES. H. W. Nutting. M. C. Pfund, N. Y. State Coll. of Home Econ., Cornell Univ. adviser. (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables). Publ. in Food Research 7, pp. 48-55 (1942) Reported in Notes on Research No. 6, p. 36, 1941. COMPLETED

VARIATIONS IN THE BLACKENING OF COOKED POTATOES ATTRIBUTABLE TO VARIETY AND/OR CULTURAL CONDITIONS. M. Boggs, E. Feldmeier, B. McCready and M. Wilde. M. S. Pfund, N. Y. State Coll. Home Econ., Cornell Univ., adviser (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables). Coop: Much of the material is furnished by and grown under the supervision of members of the N. Y. State Coll. Agr. Reported in Notes on Research No. 6, p. 37, 1941. IN PROGRESS

The extent and intensity of blackening in steamed, peeled potatoes as influenced by variety and cultural conditions is being investigated. The pH at stem and bud ends of raw and cooked tubers is measured. The intensity and extent of blackening is observed and compared with a color chart under fluorescent light. Blackening varies with variety and cultural conditions. The pH of the stem end is somewhat higher than the bud end. Stem-end pH of tubers of a given lot that blacken is somewhat greater than that of comparable non-blackening tubers; it increases with specific gravity.

THE INFLUENCE OF STORAGE CONDITIONS ON STEM BLACKENING OF POTATOES. F. E. Kaplan, under the direction of O. E. Curtis and M. C. Pfund, N. Y. State Coll. Home Econ. Cornell Univ. (Doctor's thesis). (Part of larger project, Quality of New York State Fruits and Vegetables). Coop. with Dept. of Plant Physiol. IN PROGRESS

Methods of storage that might influence blackening in cooked potatoes are being investigated. Tubers are subjected to varying atmospheres. Tuber pH is measured with a glass electrode. Blackening seems to originate inside the cortex and appears to be limited to the vascular tissue, probably the phloem. The pith does not blacken by itself although blackening may diffuse to this area. Minute quantities of acetic acid vapor in the storage chamber prevent blackening. The effect lasts only a short time, sometimes less than 24 hours; the pH of both stem and bud/^{end} is decreased but there is still a difference between them.

FOODS

Quality (Continued)

Fruits and vegetables (Continued)

THE CULINARY QUALITY OF MINNESOTA POTATOES. I. T. Noble and L. J. Nyquist, Univ. Minn. (Professional). (Part of larger project, A Study of the Culinary Quality of Minnesota Potatoes. Reported in Notes on Research No. 5, p. 48, 1940. IN PROGRESS

The culinary quality of the important commercial varieties of potatoes grown in Minnesota are being studied subjectively for the third consecutive season. If possible, objective measurements of mealiness and of color will be made, also.

THE RELATION BETWEEN COLOR, COMPOSITION, CULINARY QUALITIES AND MARKETING VALUE OF INDIANA POTATOES GROWN ON MUCK SOILS. G. M. Redfield and O. D. Milligan, Purdue Univ. (Professional). Coop. with Dept. of Horticulture. Reported in Notes on Research No. 6, p. 52, 1941. IN PROGRESS

Fifteen varieties of potatoes grown on Indiana muck soil with the same fertilizer treatment and sixteen samples of one variety with sixteen different fertilizer treatments were cooked and tested objectively on the penetrometer and slot extrusion tester. Samples of the potatoes included in the varietal group were also used for making potato chips and color comparisons were made. Greater variations were observed in the varietal samples than in the fertilizer samples. All of the potato samples tested were satisfactory from the standpoint of mealiness and cooking quality. The varietal samples used in the making of chips had all been stored under the same conditions. Eight varieties made very satisfactory chips, one was classed as medium and six were definitely poor.

INVESTIGATIONS OF FOOD QUALITY: EFFECT OF DIFFERENT FERTILIZER TREATMENTS ON COOKING QUALITY OF POTATOES. E. H. Dawson and B. E. Brown, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Potato Investigations). Coop: Potatoes are grown by, and the tests are made in cooperation with Bureau of Plant Industry. IN PROGRESS

Experiments are being performed to determine (1) the influence on the cooking quality of potatoes of varying ratios and sources of potash, and (2) the influence on cooking quality of continuous fertilizer treatment lacking (a) potash, (b) phosphorous, (c) nitrogen compared with complete fertilizer treatment. The fertilizer treatments are well replicated and, in order to obtain representative tuber samples for cooking tests, a large sample is obtained from each replicate. Specific gravity, starch, sugar, total solids and protein determinations as well as cooking tests are made. Studies so far tend to emphasize the importance of potash treatment.

FOODS

Quality (Continued)

Fruits and Vegetables (Continued)

INVESTIGATIONS OF FOOD QUALITY: A STUDY OF COOKING QUALITY OF OLD AND NEW VARIETIES OF POTATOES. E. H. Dawson, F. J. Stevenson and R. V. Akeley, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Potato Investigations). Coop: Potatoes are grown by the Bureau of Plant Industry. IN PROGRESS

To furnish information as to the cooking quality of different varieties of potatoes, twenty-seven varieties, all grown in Aroostook County, Maine, with three replications, were tested in duplicates of 5 samples each from each of the replications. Specific gravity is determined by the use of salt solutions. The potatoes are steamed to an internal temperature of 96° C. and then scored for cohesion, color, blackening of the flesh, flavor and texture by a committee of five judges. This year the potatoes are above average for mealiness.

CULINARY TESTS OF POTATOES. E. B. Snyder and H. O. Werner. R. Gibbons, Univ Nebr., adviser (Professional). (Part of larger project, A study of Disease Resistance Yield and Growth in New Strains and Varieties of Potatoes). Coop. Dept. of Hort. IN PROGRESS

Cooking tests conducted as outlined previously have been continued with 8 varieties of potatoes grown in 3 areas of the state. The Irish Cobblers received the highest ratings. The general differences found for each variety were consistent in each area. The further east the potatoes were grown the poorer the cooking quality was found to be. There seems to be close correlation between texture, specific gravity and dry matter content.

PENETRATION AS AN OBJECTIVE TEST FOR MEALINESS IN POTATOES. B. Collins, K. Longree and other assistants. M. C. Pfund, N. Y. State College of Home Econ., adviser (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables). Coop: Much of the material was furnished and grown under the supervision of the N. Y. State Coll. of Agriculture. Reported in Notes on Research No. 6, p. 32, 1941
COMPLETED

A penetration method for testing mealiness in cooked potatoes was developed. The force in grams required to penetrate a cylinder of cooked potato one millimeter by a lever-type cutting wire penetrometer was determined. These values were related to personal-opinion ratings of the outer medulla and to specific gravity of the raw tuber. With increasing mealiness and specific gravity, penetration values increased. Differences in mealiness attributable to cooking method were also measured. For the 1406 potatoes tested in 1940-41, the correlation coefficient for the association of specific gravity and penetration was 0.675.

FOODS

Quality (Continued)

Fruits and vegetables (Continued)

EXTRUSION AS AN OBJECTIVE TEST FOR MEALINESS IN POTATOES. B. Collins, K. Longree and other assistants. M. C. Pfund, N. Y. State Coll. Home Econ., Cornell Univ., adviser (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables). Coop: Much of the material was furnished and grown under the supervision of the N. Y. State Coll. of Agriculture. Reported in Notes on Research No. 6, p. 32, 1941. COMPLETED

An extrusion method for testing mealiness in cooked potatoes was developed. Three areas of steamed potatoes were forced through 50-micron openings and the force in pounds required recorded graphically. These values were related to the personal-opinion-ratings of the outer medulla of the cooked tuber and the specific gravity of the raw tuber. With increasing mealiness and specific gravity, each of the three areas showed increasing extrusion value; the three areas had very different extrusion values. Differences between inner medulla and cortex were larger as mealiness increased. Differences in mealiness attributable to cooking method were also measured. Potatoes that gave abnormal extrusion values were investigated further (see following abstract). For the 1406 potatoes tested in 1940-41, the correlation coefficient for the association of specific gravity and extrusion of the outer medulla was 0.779.

EXTRUSION VALUES IN RELATION TO THE ANATOMY OF THE POTATO TUBER. K. Longree, N. Y. State Coll. Home Econ., Cornell Univ. (Professional). (Part of larger project, Quality of New York State Fruits and Vegetables). On file, Foods and Nutr. Dept., N. Y. State Coll. of Home Econ., Cornell Univ. Reported in Notes on Research No. 6, p. 33, 1941. COMPLETED.

The underlying causes of "slanting" or "abnormal" extrusion values (see No. 6, p. 32, 1941 and this issue, Extrusion as an Objective Test for Mealiness in Potatoes) were investigated. Sections of raw tubers were subjected to microscopical examination. Similar examinations were made of three portions of the cooked tubers, unextruded portions and extruded portions and those left in the extrusion bomb. For the limited number of varieties studied non-constant or "abnormal" extrusion values of the cortex could be traced to a large extent to (1) resistance of a relatively high proportion of the cortical cells to breaking during extrusion and/or (2) a comparatively large number of stone cells in the cortical tissue

STABILITY OF ASCORBIC ACID IN VEGETABLE JUICES AS RELATED TO OXIDIZING AND PROTECTING FRACTIONS. V. C. Kercher, under direction of E. G. Halliday and W. F. Hinman, Univ. Chicago (Master's Thesis 1941). On file Univ. Chicago Library, Chicago, Ill. COMPLETED

The stability of ascorbic acid in lemon, cucumber, cabbage, cauliflower, asparagus, green pepper, green pea, and watercress juices was investigated in relation to any oxidizing enzymes or protective material in their acetone precipitates and filtrates, respectively. A correlation between the stability of the juice and the activity of its fractions was found only in the case of cucumber and green pepper and possibly in the case of green pea and asparagus.

FOODS

Quality (Continued)

Meats

I
INVESTIGATIONS OF FOOD QUALITY - MEAT: A STUDY OF CERTAIN ANIMAL PRODUCTION FACTORS IN RELATION TO EDIBLE QUALITY OF MEAT. L. M. Alexander, J. C. Lamb, O. G. Hankins, and R. L. Hiner, Bur. Home Econ., U. S.D.A. (Professional). (Part of larger project, Cooperative Meat Investigations). Coop: Animals raised by Bur. Animal Industry, U.S.D.A., and State Agr. Expt. Stas., and graded by Agr. Mktg. Serv., U.S.D.A. Reported in Notes on Research No. 6, p. 55, 1941.

IN PROGRESS

As the Bureau of Home Economics' share in cooperative meat production projects, cuts from experimental animals are cooked, weighed for shrinkage, and tested for flavor, tenderness and other factors. In one series of feeding experiments, comparisons are made on cattle fed to the same degree of finish at different rates of fattening. In another series, cattle fed roughage only are compared with those fed grain and roughage in various proportions. Typical cotton belt and typical corn belt rations are fed to cattle in another study. Breeding experiments are being continued with cattle.

INVESTIGATIONS OF FOOD QUALITY - MEAT: A STUDY OF CERTAIN ANIMAL PRODUCTION FACTORS IN RELATION TO EDIBLE QUALITY OF MEAT. L. M. Alexander, J. C. Lamb, O. G. Hankins, and R. L. Hiner, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Cooperative Meat Investigations). Coop: Animals raised by Bur. Animal Industry, U.S.D.A., and State Agricultural Expt. Stas., and graded by Agr. Mktg. Serv. U.S.D.A. Publ. in Report of the Chief of the Bureau of Animal Industry, U.S.D.A., 1941. Reported in Notes on Research No. 6, p. 55, 1941.

COMPLETED

Experiments with cattle showed the importance of breeding in producing differences in quality of meat. Feeding experiments revealed little difference in the quality of meat from 3-1/2-year-old steers equally finished on blue grass and on corn with cottonseed meal and hay in dry lot, except for more carotene in the fat of the grass-fed animals. In another experiment, full-fed and limited-fed cattle brought to the same degree of finish differed little in meat characteristics. Meat from steers fed corn and roughage for the same period as those fed roughage alone was more than 30 percent more tender.

THE EFFECT OF RATIONS MADE UP LARGELY OF SINGLE GRAINS UPON THE GROWTH AND QUALITY OF MEAT PRODUCED BY SWINE. R. M. Griswold. M. Dye, Mich. State College, adviser (Professional). (Part of larger project, A Study of the Factors which Influence the Quality and Palatability of Meat). Coop. with V. A. Freeman, Animal Husbandry Dept.). Probable date of completion 1943.

IN PROGRESS

Meat from swine fed largely on single grains was roasted, tasted, and tested in a Warner-Bratzler shear. The data are being analyzed.

Quality (Continued)
Meats (Continued)

EFFECT OF DEGREE OF FATNESS ON TENDERNESS OF LAMB. S. Cover, J. C. Miller, and C. E. Murphy, Tex. Agr. Expt. Sta. (Professional). Coop. with Dept. of Animal Husbandry, A. and M. College. Reported in Notes on Research No. 5, p. 35, 1940. IN PROGRESS

Paired lambs of the same sex and of approximately equal weight at the beginning of the test are fed individually. One of each pair is full-fed and the other limited fed. The left legs are cooked and tested for tenderness by the paired-eating method. Separable fat is obtained for each wholesale cut in the right side of the carcass. Tests will be continued until the data collected are sufficient to warrant conclusions.

QUALITY IN BEEF - BEEF TYPE AND DAIRY TYPE STEERS COMPARED. R. M. Griswold. M. Dye, Mich. State Coll., adviser. (Part of larger project, A Study of the Factors which Influence the Quality and Palatability of Meat). Coop. with G. A. Branaman, Animal Husbandry Dept. Probable date of completion 1943. IN PROGRESS

Meat from beef-type and dairy-type animals was roasted, tasted, and tested in a Warner-Bratzler shear. The data are being analyzed.

THE EFFECT OF TIME AND TEMPERATURE ON THE SOLUBILITY OF TENDONS. B. McLaren. S. Cover, Tex. Agr. Expt. Sta., adviser (Professional). (Part of larger project, The Chemical and Physical Factors Responsible for Tendering Meat During Cooking). IN PROGRESS

In order to determine whether tendering of meat during cooking may be influenced by the change from collagen into gelatin, test tubes containing tendon-powder suspended in water were subjected to two kinds of heat treatment. In one, the time-temperature curves of individual paired roasts were reproduced. In the other, constant temperatures were maintained for various periods of time--the temperatures selected being those which seemed to be of possible importance in tendering meat during cooking. In both series of tests the collagen breakdown was determined at regular intervals by removing individual tubes for analysis.

FOODS

Quality (Continued)
Meats (Continued)

EFFECT OF STORAGE CONDITIONS ON PALATABILITY OF BEEF. R. M. Griswold and M. A. Wharton. M. Dye, Mich. State Coll., adviser (Professional) Publ. in Food Research No. 6, pp. 517-528 (1941) COMPLETED

Meat stored 37 days at 34° F. had a somewhat stronger aroma and flavor but was slightly less juicy than meat stored 9 days at the same temperature. Meat held at 60° F. for 48 hours was less desirable in appearance and odor than meat held under similar conditions but with ultraviolet lights. The palatability and tenderness of meat ripened by these two methods were similar, however, showing that the lights themselves did not affect the quality of the stored meat. Meat stored at 36° F. and meat held for the same length of time at 60° F. with irradiation graded approximately the same in palatability, except for tenderness which was slightly greater in meat stored at the higher temperature.

INVESTIGATIONS OF FOOD QUALITY - POULTRY: A STUDY OF THE EFFECT OF STRAIN ON THE EDIBLE QUALITY OF TURKEYS. L. M. Alexander, J. C. Lamb, H. M. Harshaw, and S. J. Marsden, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Poultry Meat and Egg Quality Studies). Coop: Turkeys raised by the Bureau of Animal Industry. On file Bur. Home Econ. and Bur. Animal Industry. U.S.D.A. Reported in Notes on Research No. 6, p. 55, 1941. COMPLETED

The Bureau of Animal Industry completed a two-year poultry-production experiment to determine the relative merits of the following strains of turkeys: Broad Breasted Bronze, Standardbred Bronze, White Holland, and Small-type White. In the Bureau of Home Economics six males and six females of each strain were roasted at moderate temperatures, weighed for shrinkage, and judged for flavor, tenderness and other factors of palatability. Data have been partially analyzed. Results furnish basis of recommendations to turkey producers.

INVESTIGATIONS OF FOOD QUALITY - POULTRY: A STUDY OF THE EFFECT OF CERTAIN PRODUCTION FACTORS ON THE EDIBLE QUALITY OF TURKEYS. L. M. Alexander, J. C. Lamb, H. M. Harshaw, and S. J. Marsden, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Poultry Meat and Egg Quality Studies). Coop: Turkeys are raised by the Bureau of Animal Industry. IN PROGRESS

To adjust turkey diets and management to materials available in the present emergency and at the same time insure highly palatable meat, the Bureau of Animal Industry is conducting feeding experiments. Turkeys raised in these tests are roasted in the Bureau of Home Economics, weighed for shrinkage, and judged for flavor, tenderness and other factors of palatability.

Quality (Continued)
Fats

THE QUALITY OF LARDS FOR USE IN FOOD PREPARATION; I. SMOKING POINTS. L. A. Rolf, E. F. Whiteman and J. A. Lorr. D. E. Shank, Bur. Home Econ., U.S.D.A., adviser (Professional). (Part of larger project, The Desirability of Certain Types of Household Fats for Use in Food Preparation). IN PROGRESS

New standards for lard were set up by the U.S.D.A. in August 1940. The range of smoking points of lards has been determined preliminary to the study of the desirability of the new lards. For purposes of comparison a table is being prepared giving the range of smoking points of edible fats and oils available on the market. Smoking points are determined by the visual method using the Cleveland open flash cup. Several different samples of each type of fat and oil have been examined and it appears that they fall in fairly well defined groups with respect to smoking point.

INFLUENCE OF SOME DIETARY FACTORS ON THE DEVELOPMENT OF RANCIDITY IN THE FAT OF THE WHITE RAT. A. Overman, Oreg. State Coll. (Professional). Publ. in Jour. Biol. Chem. 142 (1942) pp. 441-444. COMPLETED

Groups of rats were fed either a basal diet only, the basal diet plus ascorbic acid, or the basal diet plus hydroquinone. The abdominal fat was stored and analyzed for rancidity at stated intervals, using the Lea peroxide test. Ascorbic acid feeding together with a low percent of gain in weight resulted in a significant increase in resistance of the fat to rancidity.

A STUDY OF CERTAIN PHYSICAL AND CHEMICAL PROPERTIES OF FATS IN RELATION TO THEIR SHORTENING VALUE IN BAKED PRODUCTS. L. R. Hornstein. F. B. King, Bur. Home Econ., U.S.D.A., adviser (Professional). (Part of larger project, The Quality of Certain Types of Household Fats for Use in Food Preparation). Submitted for publ. in Food Research. On file Bur. Home Econ. U.S.D.A. Reported in Notes on Research No. 6, p. 31, 1941. COMPLETED

PHYSIOLOGY OF NUTRITION

Energy Metabolism

BASAL METABOLISM OF NORMAL INFANTS FROM THREE TO FIFTEEN MONTHS OF AGE, WITH SPECIAL REFERENCE TO TWINS. D. D. Clagett. M. L. Hathaway, N. Y. State Coll. Home Econ., adviser (Doctor's Thesis). (Part of larger project, Energy Metabolism of Infants and Small Children. Publ. Amer. Jour. Diseases Children, 62, pp. 967-980, Nov. 1941. Reported in Notes on Research No. 5, p. 53, 1940. COMPLETED

THE BASAL METABOLISM OF NORMAL COLLEGE GIRLS, BORN AND REARED IN ARIZONA. M. E. Willard, under direction of E. M. Thompson, Univ. Ariz. (Master's Thesis, 1942). Reported in Notes on Research No. 6, p. 57, 1941. IN PROGRESS

This is a comparison of four standards for predicting the basal metabolisms of normal women of college age with those obtained for women who are born and reared in Arizona. The Benedict-Roth apparatus is being used and standard procedures are followed. Basal metabolisms and their deviations from the standards have been determined to date for 75 subjects.

BASAL METABOLISM STUDIES ON GEORGIA COLLEGE WOMEN IN THE WINTER AND SUMMER SEASONS. I. Gaines, under direction of C. L. Newton, Univ. Ga. (Master's Thesis 1941). On file Univ. Ga. Library. COMPLETED

To determine whether there is an appreciable difference in the metabolic rate during the winter and summer seasons, the subjects (14 college women) came to the laboratory before breakfast and rested for thirty minutes prior to the tests, in which the Benedict-Roth apparatus was used. The average basal metabolism was about 9% lower than the standards in the winter and approximately 14% lower than these during the summer. This drop of approximately 5% seems to indicate that hot weather causes a lowering of the basal metabolic rate.

EFFECT OF TEA UPON THE ENERGY METABOLISM OF CHILDREN. J. Whitacre, Tex. Agr. Expt. Sta. (Professional). Full report Jour. Home Econ. 34 (1941) pp. 187-192. Reported in Notes on Research No. 6, p. 59, 1941. COMPLETED

THE IMMEDIATE EFFECT OF CIGARETTE SMOKING UPON THE BASAL METABOLIC RATES OF UNIVERSITY MEN AND WOMEN. V. R. Goddard and J. G. Voss, Univ. Cal., Los Angeles, Calif. In press, J. Lab. and Clin. Med. COMPLETED

Metabolic rates taken after smoking showed, as a rule, appreciable deviations from the control tests, but some of the deviations were positive and others were negative. The advisability of refusing patients permission to smoke prior to basal metabolic tests is supported by these results.

PHYSIOLOGY OF NUTRITION

Carbohydrate Metabolism

THE INFLUENCE OF CERTAIN DIAMINO AND DICARBOXYLIC AMINO ACIDS UPON THE CATARACTOGENIC ACTION OF GALACTOSE. G. M. Cook and H.S. Mitchell. H. S. Mitchell, Mass. State Coll., adviser (Professional). (Part of larger project, The Cause and Control of Nutritional Cataract). Reported in Notes on Research No. 6, p. 60, 1941. IN PROGRESS

It was reported in Notes on Research No. 6, p. 60, 1941, that certain individual amino acids of the diamino-dicarboxylic acid fraction of the enzymic hydrolysate afforded as much protection against galactose cataract as the whole hydrolysate. Of the four amino acids studied one has indicated slight protection. It and related compounds are being studied.

Lipid Metabolism

MIDDLE AND OLD AGE IN CHOLESTEROL FED RATS. R. Okey, Univ. Cal. (Professional). (Part of larger project, Lipid Metabolism Studies). Publ. Proc. Soc. Expt. Biol. Med. 46, pp. 466-70, 1941. COMPLETED

Rats have been fed diets containing 1% cholesterol from weaning throughout their life span. Their growth, health and time of survival have not differed significantly from those of control animals on the same basic diet without the cholesterol.

EFFECT OF EXCESS INTAKE OF VARIOUS PORTIONS OF THE VITAMIN B COMPLEX ON LIPID METABOLISM IN THE GUINEA PIG. B. Kennedy, under direction of R. Okey, Univ. Cal. (Doctor's Thesis). (Part of general studies of lipid metabolism). IN PROGRESS

Pure crystalline vitamins were added to the diets previously used for study of lipid metabolism in the guinea pig. Results to date have indicated that excess intake of several of the B factors increased fat storage, shortened the time of appearance of anemia and other toxic symptoms in animals given diets of high cholesterol content.

Protein Metabolism

THE EFFECT OF HEATED PROTEINS UPON THE NITROGEN METABOLISM OF YOUNG DOGS. M. Groody and E. O. Weast. A. F. Morgan, Univ. Cal., adviser. (Professional). (Part of larger project, Effect of Heat on Nutritive Value of Proteins). Reported in Notes on Research No. 6, p. 63, 1941. IN PROGRESS

The failure of young dogs fed an adequate diet except that the casein was heated for 10 to 30 minutes at 200°C. was rapid and was accompanied by large fecal nitrogen losses. When the casein was heated only to 140°C. the dogs grew better but were not comparable with their controls which received the raw casein diet. An increase in the level of heated protein in the diet increased the severity of the nutritive failure. Severe liver damage and low serum protein content characterized the nutritive failure.

PHYSIOLOGY OF NUTRITION

Protein Metabolism (Continued)

STUDIES ON THE INFLUENCE OF ASCORBIC ACID AND OF CITRATES ON THE NITROGEN RETENTION OF PRESCHOOL CHILDREN. M. N. Whelan and M. S. Lew, under direction of M. L. Hathaway, N. Y. State Coll. Home Econ. Cornell Univ. (Master's Thesis 1945). (Part of larger project, Studies on the Influence of Ascorbic Acid and of Citrates on the Mineral Retention of Preschool Children). Reported in Notes on Research No. 6, p. 63, 1941. IN PROGRESS

See report in No. 6, p. 65.

Mineral Metabolism

Calcium

THE EFFECT OF AIR TEMPERATURE ON CALCIUM METABOLISM. M. S. Gutowska, Mass. State Coll. (Professional) IN PROGRESS

The purpose of this study is to determine the influence of high and low temperature on calcium retention in rats. Constant temperature units have been built for the animals.

THE INFLUENCE OF ORANGE JUICE ON CALCIUM RETENTION IN ADULTS. C. E. Ludwig, under direction of C. Schuck, Purdue Univ. (Master's Thesis 1941). Abstract in Jour. Home Econ. 33 (1941) p. 600. Thesis on file Purdue Univ. Library. COMPLETED

Two normal adult women served as subjects. A 9-day study was divided into a 3-day preliminary period and two 3-day experimental periods. The basal diet, which was planned to furnish approximately the minimum amount of calcium necessary for equilibrium, was ingested during the preliminary period and the first experimental period. During the second experimental period the basal diet was supplemented with 600 ml. of orange juice and 150 ml. of milk were omitted to keep the total calcium intake for both experimental periods near the same level. Both subjects showed improved utilization of calcium during the period when orange juice was given.

STUDIES ON THE INFLUENCE OF ASCORBIC ACID AND OF CITRATES ON THE CALCIUM RETENTION OF PRESCHOOL CHILDREN. E. K. Watson, E. S. Whelan and F. L. Meyer, under direction of M. L. Hathaway, N. Y. State Coll. Home Econ., Cornell Univ. (Doctor's Thesis 1945). (Part of larger project, Studies on the Influence of Ascorbic Acid and of Citrates on the Mineral Retention of Preschool Children). Reported in Notes on Research No. 6, p. 64, 1941. IN PROGRESS

The procedure is the same as that given in No. 6, p. 64. The level of calcium intake has been reduced from 1 gram per day to 0.7 gram per day, but the nitrogen and phosphorus have been maintained at approximately the levels used in 1940-41. During the last two periods of the study orange juice equivalent to 110 mg. of ascorbic acid has been the only supplement added to the basal diet.

PHYSIOLOGY OF NUTRITION

Mineral Metabolism (Continued)

Phosphorus

THE MECHANISM OF EXCESS VITAMIN D ACTION STUDIED BY RADIO-P IN DOGS. N. Shimotori. A. F. Morgan, Univ. Cal., adviser (Professional). (Part of larger project, Mode of Action of Vitamin D). COMPLETED

Radioactive phosphorus isotope was used to follow the metabolism of phosphorus in cocker spaniels given one massive dose of vitamin D₂. There resulted a decreased phosphorus retention in the soft tissues, but the retention in the femur was increased to two-fold. The marked increase in urinary phosphorus excretion appeared to have originated from sources other than the recently ingested food phosphorus, possibly from the soft tissues.

STUDIES ON THE INFLUENCE OF ASCORBIC ACID AND OF CITRATES ON THE PHOSPHORUS RETENTION OF PRESCHOOL CHILDREN. M. Folsom and F. Meyer, under direction of M. L. Hathaway, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1943). (Part of larger project, Studies on the Influence of Ascorbic Acid and of Citrates on the Mineral Retention of Preschool Children). Reported in Notes on Research No. 6, p. 66, 1941. IN PROGRESS

The procedure is the same as that given in No. 6, p. 66. Changes in the diet are indicated under the calcium study.

Iron

THE AFTER-EFFECT OF AN IRON SUPPLEMENT ON THE FECAL EXCRETION OF IRON. T. McMillan, under direction of R. M. Leverton, Univ. Nebr. (Master's Thesis). (Part of larger project, The Mineral and Nitrogen Metabolism of College Women). On file Library, Univ. Nebr. COMPLETED

The purpose of the study was to determine whether the gastro-intestinal tract would re-excrete iron after there had been a considerable storage of the metal and medication stopped. The fecal excretion and hemoglobin values of 13 college women on a freely chosen diet was followed for 1 week; and again for the following week when 126 mg. of iron were given daily; and for a 30-day follow-up period. Indications are that about 1/2 of the iron supplement is absorbed and none re-excreted. Hemoglobin values were not raised. This offers further evidence that the gastro-intestinal tract does not have the ability to re-excrete iron.

Copper

THE COPPER METABOLISM OF YOUNG WOMEN. R. M. Leverton. M. Fedde, Univ. Nebr., adviser (Professional). Probable date of completion June 1942. IN PROGRESS

Copper determinations are being completed on the material collected in the hundred studies. These will be published together with the results of the copper figures obtained from the long metabolism studies.

PHYSIOLOGY OF NUTRITION

Mineral Metabolism (Continued)

Vanadium

VANADIUM--A CONSIDERATION OF ITS POSSIBLE BIOLOGICAL ROLE. E. P. Daniel and L. M. Henston, Bur. Home Econ. U.S.D.A. (Professional). (Part of larger project, Nutritional Significance of Trace Elements--Vanadium). Submitted for publ. in Amer. Jour. Physiol. On file Bur. Home Econ., U.S.D.A. Reported in Notes on Research No. 4, p. 66, 1939. COMPLETED

The distribution of vanadium in biological materials and the possible significance of this element in nutrition were studied. Eggs and milk, rat stock diets, and tissues of normal adult stock rats were analyzed by means of the spectrograph. The results of these analyses do not confirm reports in the literature indicating rather widespread distribution of this element.

Vitamins

A and Provitamin A

UTILIZATION OF CAROTENE AS IT OCCURS IN NATURAL FOODSTUFFS BY HUMANS. E. C. Callison. E. O. Keiles, Bur. Home Econ., U.S.D.A., adviser (Professional). (Part of larger project, The Role of Various Dietary Factors in Promoting the Utilization of Carotene by the Animal Body). IN PROGRESS

Humans are depleted of vitamin A stores until dark adaptation as measured by the Hecht-Shlaer Adaptometer becomes abnormal. The minimal amount of vitamin A required to keep dark adaptation normal is determined. The subject is depleted a second time and the minimal amount of one of the carotene-rich natural foods necessary to restore normal dark adaptation is established.

A STUDY OF FACTORS PRESENT IN FATS AND OILS AFFECTING THE GROWTH OF RATS RECEIVING SMALL QUANTITIES OF CAROTENE. O. E. McElroy. L. E. Booher, Bur. Home Econ., U.S.D.A., adviser (Professional). On file Bur. Home Econ. U.S.D.A. Reported in Notes on Research No. 6, p. 62, 1941. COMPLETED

THE EFFECT OF VARIOUS DIETARY LIPIDS ON THE UTILIZATION OF BETA-CAROTENE AND VITAMIN A IN THE RAT. E. C. Callison and F. R. White. E. O. Keiles, Bur. Home Econ., U.S.D.A., adviser (Professional). (Part of larger project, The Role of Various Dietary Factors in Promoting the Utilization of Carotene by the Animal Body). IN PROGRESS

Rats maintained on a basal diet devoid of vitamin A and fat, but complete in all other respects, are fed supplements of carotene or vitamin A and various fats. The effects on vitamin A metabolism are being studied.

PHYSIOLOGY OF NUTRITION

Vitamins

A and Provitamin A (Continued)

THE EFFECT OF CERTAIN FATS AND UNSATURATED FATTY ACIDS UPON THE UTILIZATION OF CAROTENE. W. C. Sherman, An. Husbandry, Ala. Expt. Sta. (Professional). (Part of larger project, A Study of Quality in Cowpeas and Soybeans for Human Food). Publ. in Jour. Nutr. 22 (1941) pp. 153-165. COMPLETED

Various natural oils were fed to vitamin A deficient rats receiving controlled levels of carotene. Soybean oil gave the best growth. Cottonseed oil, linseed oil, corn oil and wheat germ oil also had a beneficial effect upon growth. Butterfat and coconut oil had no appreciable effect. Pure Methyl linolate or linolenate decreased the effectiveness of low levels of carotene when these esters were fed with the carotene. The antagonistic action of these esters to carotene was overcome by the addition of soybean oil.

THE EFFECT OF LIVER DAMAGE PRODUCED BY LOW PROTEIN DIETS ON THE UTILIZATION OF CAROTENE AS PRO-VITAMIN A. A. L. Bentley, under direction of A. F. Morgan, Univ. Cal. (Doctor's Theses). (Part of larger project, Effect of Heat on Nutritive Value of Proteins). IN PROGRESS

Both rats and dogs are being used. The liver damage is seen in dogs fed heated protein diets earlier than in rats. If carotene is poorly utilized by such animals some evidence as to the site of carotene to vitamin A transformation may be obtained--from histological study of the organs.

THE EFFECT OF THE LEVEL OF PROTEIN IN THE DIET UPON UTILIZATION OF VITAMIN A. T. Porter, E. Kelly and I. Bateman. T. Porter and M. Dye, Mich. State Coll., advisers (Professional). (Part of larger project, Study of the Relationship Between the Nutritive Content of the Diet and the Vitamin A Requirement). IN PROGRESS

Triads of albino rats, depleted on the U.S.P.X. assay diet, were fed graduated levels of vitamin A and three basal diets containing 9, 18, and 36 per cent of protein respectively. Growth and incidence of "abscesses" were used as criteria of response. The 18 percent level of protein gave a more favorable gain in weight response than did the 9 and 36 percent levels. Work is in progress on the total and differential white cell from stained slides and on the width of dentine of the rats incisor for this same experimental group.

PHYSIOLOGY OF NUTRITION

Vitamins

A and Provitamin A (Continued)

THE EFFECT OF THE QUANTITY OF BASAL FOOD INTAKE UPON THE UTILIZATION OF VITAMIN A. K. D. Muelder and E. Kelly. M. Dye, Mich. State Coll., adviser (Professional). (Part of larger project, A Study of the Relationship Between the Nutritive Content of the Diet and the Vitamin A Requirement). Publ. in Jour. Nutr. 21, 1941, pp. 13-24. COMPLETED

This experiment was planned to test the influence of the caloric intake upon the utilization of vitamin A. Triads of albino rats, depleted of vitamin A stores on the U.S.P.X assay diet, were fed graduated levels of A. Rate of growth and incidence of "abscesses" were used as criteria of response. For the levels of vitamin A used, the caloric intake was responsible for more than 50 percent of the growth response as measured by gain in weight. However, it had no statistically significant influence upon infection as measured by incidence of "abscessed areas".

THE EFFECT OF THE LEVEL OF FAT IN THE DIET UPON UTILIZATION OF VITAMIN A. K. D. Muelder and E. Kelly. M. Dye, Mich. State Coll. adviser (Professional). (Part of larger project, A Study of the Relationship between the Nutritive Content of the Diet and the Vitamin A Requirement). Publ. in Jour. Nutr. 23 (1942) pp. 335-344. COMPLETED

Triads of albino rats, depleted on the U.S.P.X assay diet, were fed graduated levels of vitamin A and three iso-caloric basal diets, differing only in percent of calories derived from fat. A basal diet containing 10 percent of fat produced statistically higher gains in weight than one containing no fat, but not greater than one containing 5 percent of fat. For the levels of fat and units of vitamin A studied, the level of vitamin A had more influence upon gain in weight than did dietary fat. Growth in length and incidence of "abscesses" were not affected by the level of dietary fat.

THE EFFECT OF THE LEVEL OF THIAMIN ON THE UTILIZATION OF VITAMIN A. E. Kelly and T. Porter. M. Dye, Mich. State Coll., adviser (Professional). (Part of larger project, A Study of the Relationship Between the Nutritive Content of the Diet and the Vitamin A Requirement).

IN PROGRESS

Preliminary observations on 108 animals to determine the necessary modifications of the U.S.P.X vitamin A basal diet have been completed. Observations have been made on 150 animals fed graduated levels of vitamin A and graduated levels of thiamin during a six week experimental period. Statistical analysis of results are in progress.

PHYSIOLOGY OF NUTRITION

Vitamins

A and Provitamin A (Continued)

THE RELATION OF LIVER STORES TO THE OCCURRENCE OF EARLY SIGNS OF VITAMIN A DEFICIENCY IN THE WHITE RAT. S. Brenner, under direction of M. H. Brookes, Univ. Chicago (Master's Thesis 1941). Submitted for publ. in Jour. Nutr. On file Univ. Chicago Libraries. COMPLETED

When four week old rats were placed on a vitamin A-free diet, liver stores were lost after one week altho gains in weight continued for five. After seven weeks, the blood level of vitamin A was reduced one half, but that of the retina not appreciably. No hyperkeratosis of the stratum cornea or atrophy of sebaceous glands was observed. When rats had been made hypervitaminotic previous to depletion, the vitamin A content of liver and blood fell rapidly until it approached the levels in the unsupplemented controls. The vitamin A content of the retina was reduced at the eighth week.

B Complex

THE INTERRELATIONSHIPS OF THE B-VITAMINS. E. M. Heyston. E.O. Keiles, Bur Home Econ., U.S.D.A., adviser (Professional) IN PROGRESS

A study of the effect of varying quantitative relationships of the B-vitamins in the diet on growth, metabolism, and symptomatology of rats is being investigated.

VITAMIN B COMPLEX DEFICIENCY IN RATS ON MILK DIETS. E. M. Lantz, New Mex. Agr. Expt. Sta. (Professional). (Part of larger project, The Iron and Copper Content of Pinto Beans and Effect of Pinto Beans on Nutritional Anemia). Reported in Notes on Research No. 6, p. 71, 1941
IN PROGRESS

The symptoms of vitamin B complex deficiency in rats on milk diets, noted in last year's report, appear to be of two types. The first is evidently pantothenic acid deficiency. The second type appears to be related to the ability of the rat to utilize riboflavin. Lesions which appear to be identical to those found in the milk fed rats have been found in rats on a purified diet deficient in riboflavin. These lesions have healed when the riboflavin-deficient diet is replaced by a diet of dried whole milk.

PHYSIOLOGY OF NUTRITION

Vitamins

B-complex (Continued)

THE FUNCTIONS OF THE B₂ VITAMINS IN DOGS. M. Groody and M. M. Lawson, under direction of A. F. Morgan, Univ. Cal. (Master's Thesis and Professional). (Part of larger project, Functions of the B vitamins). Reported in Notes on Research No. 6, p. 73, 1941. IN PROGRESS

Young cocker spaniels fed purified diet, fat soluble vitamins, and all known crystalline vitamins have shown definite neuromuscular symptoms and nutritive failure. Dogs with multivitamin deficiencies survive as well as, or better than, those lacking only the unknowns.

THE EFFECT OF DEFICIENCIES IN THE B₂ VITAMINS ON THE GASTRIC ACTIVITY OF DOGS. H. E. Elder, under direction of A. F. Morgan, Univ. Cal. (Doctor's Thesis). (Part of larger project, Functions of the B vitamins). Reported in Notes on Research No. 6, p. 73, 1941. IN PROGRESS

Fractional gastric examination of young dogs deprived of one or more of the B₂ vitamins indicate failure of both motility and secretion, in certain of these deficiencies.

THE NATURE AND ACTION OF THE FILTRATE FACTOR WHICH PREVENTS GREYING OF RAT FUR. H. D. Simms and H. Elbaun, under direction of A. F. Morgan Univ. Cal. (Doctor's Thesis). (Part of larger project, Functions of the B Vitamins). Reported in Notes on Research No. 6, p. 73, 1941. IN PROGRESS

Various fractions of liver, yeast and molasses extracts have been examined for both fur growth and pigmentation effect on standard deficient grey rats, with and without pantothenic acid. Substances producing these two effects apparently exist in different fractions.

SOME DIETARY FACTORS INFLUENCING ACHROMOTRICHIA IN MICE. M. L. Johnson, under direction of H. T. Parsons, Univ. Wis. (Master's Thesis 1942) IN PROGRESS

Some sources of the vitamin B complex have been concentrated and fractionated for feeding black mice in which achromotrichia has been induced.

PHYSIOLOGY OF NUTRITION

Vitamins

B-complex (Continued)

THE AGGRAVATING EFFECT OF PYRIDOXIN ON ACHROMATRICHIA IN RATS.

E. M. Ross, under direction of J. Outhouse, Univ. Ill. COMPLETED

Pyridoxin has been observed to have an aggravating effect on the graying of black-haired rats. To determine whether this is due to increased metabolism (and higher vitamin needs) six triads of black rats were placed on a diet deficient only in pantothenic acid and in pyridoxin; then the effect of pyridoxin with and without dietary restriction was determined. Within three weeks all twelve rats receiving pyridoxin (i.e. the restricted as well as the ad libitum rats) were definitely gray. The "pyridoxin free" diet, in sharp contrast, induced graying in three rats only after eight weeks and three rats now on the experiment for fourteen weeks show no evidence of graying. The aggravating effect of pyridoxin is not brought about by the greater metabolic activity resulting from the ingestion of a larger quantity of food.

THE METABOLISM OF BIOTIN IN THE RAT AND CHICK. M. McGregor, under direction of H. T. Parsons and W. H. Peterson (Biochem.), Univ. Wis. (Master's Thesis 1942). IN PROGRESS

Biotin determinations by the microbiological technique of Dr. Peterson's laboratory have been made on food, excreta and portions of the digestive tracts of experimental rats.

THE METABOLISM OF BIOTIN BY MAN. J. Gardner. H. T. Parsons (and W. H. Peterson, Dept. of Biochemistry), Univ. Wis., advisers (Doctor's Thesis 1942-1943). IN PROGRESS

The purpose of the study is to determine the metabolic balance of biotin in human subjects. The microbiological assay technique of Dr. Peterson's laboratory is being used both for foods and excreta.

CHOLINE METABOLISM. R. V. Engel and E. D. Salmon (Animal Husbandry), Ala. Expt. Sta. (Professional). IN PROGRESS

The purpose is to study the physiological importance of choline and to determine the choline content of various food materials. Methods for biological and chemical assay of food materials for choline content have been developed. The choline requirement of rats at various ages is being studied.

PHYSIOLOGY OF NUTRITION

Vitamins

B-Complex (Continued)

IMPROVED DIETS FOR NUTRITIONAL AND PATHOLOGIC STUDIES OF CHOLINE DEFICIENCY IN YOUNG RATS. R. W. Engel and W. D. Salmon (Animal Husbandry) Ala. Expt. Sta. (Professional). (Part of larger project, Pathological Conditions Associated with a Lack of the Vitamin B Complex. Publ. in Jour. Nutr. 22 (1941) pp. 109-121. COMPLETED

Diets were developed which consistently produced a fatal toxicosis in young rats if the diets were not supplemented with choline. The syndrome was characterized by drowsiness, labored breathing, tremors, coma, enlarged hemorrhagic kidneys, and fatty livers. Death usually occurred in from 6 to 10 days after the rats were placed on the choline-deficient diets.

PANTOTHENIC ACID AND HEMORRHAGIC ADRENAL NECROSIS IN RATS. W. D. Salmon and R. W. Engel (Animal Husbandry), Ala. Expt. Sta. (Professional). (Part of larger project, Pathological Conditions Associated with Lack of Vitamin B Complex. Publ. in Proc. Soc. Expt. Biol. and Med. 45 (1940) pp. 621-623. COMPLETED

EFFECT OF CALCIUM PANTOTHENATE AND OTHER B FACTORS ON LIVER FAT. R. W. Engel (Animal Husbandry), Ala. Expt. Sta. (Professional). (Part of larger project, Pathological Conditions Associated with a Lack of Vitamin B Complex). Publ. in Jour. Biol. Chem. 140 (1941) pp. xxxii, xxxiii. COMPLETED

It was shown that the level of liver fat in choline deficiency was affected by pantothenic acid and other B vitamins.

C

COMPARISON OF THE HISTOLOGY OF CERTAIN MUSCLES OF VITAMIN C-DEFICIENT ANIMALS AND CONTROLS. J. A. Pelham, under direction of M. T. Harman, Kans. State Coll. (Master's Thesis 1942). (Part of larger project, An Investigation of the Effect Upon the Animal Body of Varying the Amount of Vitamin in the Diet). Coop. with Dept. Zool. IN PROGRESS

Representative muscles and connective tissue taken from 12 normal and 12 deficient guinea pigs have been prepared for microscopic study. Deficient material shows myo-degeneration, which varies in degree in different animals. A thinning and wrinkling of the muscle fibers occurs with a decrease in the cytoplasm between the nuclei. Striations remain until the muscle is completely degenerated. Different muscles in the same animal show differences in degree of effect. An understanding of these conditions may explain the lack of use of muscles and manifestation of energy in deficient animals.

PHYSIOLOGY OF NUTRITION

Vitamins

C (Continued)

THE EFFECT OF A VITAMIN C-DEFICIENT DIET UPON THE TENSILE STRENGTH OF MUSCLE FASCIAE OF GUINEA PIGS. R. F. White, under direction of M. T. Harmon, Kans. State Coll. (Master's Thesis). (Part of larger project, An Investigation of the Effect upon the Animal Body of Varying the Amount of Vitamin in the Diet). Coop. with Dept. Zool. On file Fairchild 115, Kans. State Coll., Manhattan, Kans. COMPLETED

Seventy-one animals received the modified Sherman-LaMer-Campbell vitamin C-free diet, ad libitum. Twenty-seven controls received 2.5 mg. Cebione each per day; the others, 0.5 mg. When the tensile strength of the fasciae enveloping the gastrocnemius and soleus muscles was tested the strength of fasciae of the deficient animals was from 25 percent to 50 percent less than the controls. This may indicate that weakening a common tissue (connective) is the cause of other symptoms of vitamin C deficiency.

THE RELATION OF ASCORBIC ACID TO THE CARBOHYDRATE METABOLISM OF GUINEA PIGS. H. C. Murray, under direction of A. F. Morgan, Univ. Cal. (Doctor's Thesis). Reported in Notes on Research No. 6, p. 75, 1941. IN PROGRESS

Guinea pigs in varying conditions as to ascorbic acid status are examined as to carbohydrate tolerance, liver glycogen, muscle creatine, response to insulin and spinephrin.

EFFECT OF REACTION OF THE DIET ON ASCORBIC ACID METABOLISM. I. Patterson, H. M. Hauck, N. Y. State Coll. Home Econ., Cornell Univ., adviser (Doctor's Thesis 1943). (Part of larger project, Studies on the Vitamin C Metabolism of Human Beings). Reported in Notes on Research No. 6, pp. 74, 75, 1941. IN PROGRESS

The effect of the reaction of the diet on urinary excretion of ascorbic acid and fasting plasma ascorbic acid is being studied. Periods in which the subjects receive a given supplement of ascorbic acid in addition to the basal C-low diet, which is acid forming, are being compared with similar periods in which soda is taken daily to make the urine alkaline. Since vitamin C occurs naturally in base-forming foods, an answer to this unsettled question is important in the interpretation of vitamin C metabolism studies in which crystalline ascorbic acid is used.

VITAMIN C METABOLISM STUDIES. B. Hawthorne and S. Higano, under direction of C. A. Storvick, Univ. Wash. (Master's Thesis). IN PROGRESS

Studies are being made of the vitamin C metabolism of 2 subjects. Plasma and urinary values are determined daily over a 28-day experimental period during which the subjects are on their usual diets. Further data will be obtained during a 14-day period with the subjects on the basal diet alone. At the end of this period, the tissues of the subjects will be saturated by the daily administration of synthetic ascorbic acid. Several 6-hour urine and plasma studies will furnish the data for estimating the renal threshold for ascorbic acid in each experimental subject.

Vitamins

C (Continued)

RENAL THRESHOLD FOR ASCORBIC ACID IN NORMAL ADULTS. J. D. Sanford, under direction of H. M. Hauck, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1942). (Part of larger project, Studies on the Vitamin C metabolism of Human Beings). Reported in Notes on Research No. 6, pp. 74-75, 1941. IN PROGRESS

Plasma ascorbic acid values and values for urinary excretion of ascorbic acid for the corresponding hour, are being determined on subjects under fasting conditions and following test doses of ascorbic acid. The renal thresholds as estimated by inspection, show individual variation. Significance of the results is being tested statistically.

D

THE RATE OF ABSORPTION AND METABOLISM OF VITAMINS D₂ AND D₃ BY DOGS. N. Shimotori. A. F. Morgan, Univ. Cal., adviser (Professional). (Part of larger project, Mode of Action of Vitamin D). Reported in Notes on Research No. 6, p. 77, 1941. COMPLETED

One large dose of vitamin D as tuna liver oil, irradiated ergosterol and irradiated cholesterol, was administered to 3 young dogs and their bone development, vitamin D, and calcium content of serum and feces followed for 7 months. The rate of absorption was the same but the duration of the effect was greater in the case of the irradiated ergosterol. All of the dogs were protected against rickets by this treatment.

THE EFFECT OF VITAMIN D₂ AND D₃ UPON THE TISSUES OF CHICKS. E. O. Yeast (and S. Lepkovsky,²Poultry³Research), A. F. Morgan, Univ. Cal., adviser (Professional). (Part of larger project, The Mode of Action of Vitamin D) Coop. with Poultry Research. Reported in Notes on Research No. 6, p. 77, 1941. IN PROGRESS

One large dose of vitamin D is administered to chicks as irradiated ergosterol (D₂) or delsterol (D₃) and blood and soft tissue calcium, bone ash and body growth followed for several weeks. The discrepancy between antirachitic and other effects of these vitamins is of interest.

E

ACTIVITY OF ALPHA TOCOPHEROL IN PREVENTING ANTAGONISM BETWEEN LINOLEIC AND LINOLENIC ESTERS AND CAROTENE. W. C. Sherman (Animal Husbandry) Ala. Expt. Sta. (Professional). (Part of larger project, A Study of Quality in Cowpeas and Soybeans for Human Food. Publ. in Proc. Soc. Expt. Biol. and Med. 47 (1941) pp. 199-200. COMPLETED

Alpha tocopherol was found to prevent the antagonistic action of linoleic and linolenic esters on carotene.

PHYSIOLOGY OF NUTRITION

Vitamins

I. (Continued)

THE EFFECT OF VITAMIN E ON THE UTILIZATION OF CAROTENE AND VITAMIN A BY THE RAT. E. C. Callison and M.M.Kirk. E. O. Keiles, Bur. Home Econ., U.S.D.A., adviser (Professional). (Part of larger project, The Role of Various Dietary Factors in Promoting the Utilization of Carotene by the Animal Body). IN PROGRESS

Rats are reared on a vitamin A-free and vitamin E-free diet supplemented with carotene or vitamin A at a level known ordinarily to give moderate liver stores. Alpha-tocopherol is fed at a series of levels and the liver stores of these animals are being studied using chemical and spectrographic methods.

Growth

RELATIONS OF B VITAMINS, FATS, AND AMINO ACIDS TO GROWTH AND PREVENTION OF NUTRITIONAL DERMATOSES. W. D. Salmon (Animal Husbandry). Ala. Expt. Sta. (Professional). IN PROGRESS

Unsaturated fats have a marked effect in delaying the incidence of the dermatoses caused by a lack of pyridoxine, riboflavin, or pantothenic acid. They do not prevent graying of the hair caused by pantothenic acid deficiency. Gelatine or glycine does not improve a casein diet for rats.

HISTOLOGY OF BONE GROWTH IN VITAMIN-DEFICIENT ANIMALS. H. C. Cameron, W. Va. Agr. Expt. Sta. (Professional). Coop. with Dr. G. S. Dodds, Medical School, W. Va. Univ. Reported in Notes on Research No. 6 p. 97, 1941. IN PROGRESS

As is commonly found, the rachitic rats gain less rapidly than the controls. The growth pattern falls into three fairly well-defined types, which seem to vary with season to some extent, and perhaps also with some unknown factor in the diet. The growth of leg bones is definitely retarded in rachitic rats, with less variation than in body weight; the vertebral column follows the same retardation pattern as the leg bones. It appears that the limitation of growth is a reflection in all cartilages and non-calcified tissues, of the same phosphorus deficiency which occurs in the epiphyseal cartilages of rachitic rats.

PHYSIOLOGY OF NUTRITION

Organic Acids

CITRIC ACID METABOLISM OF PRESCHOOL CHILDREN. E. Metcalf, under direction of M. L. Hathaway, New York State Coll. Home Econ., Cornell Univ. (Doctor's Thesis 1943). (Part of larger project, Studies of the Influence of Ascorbic Acid and of Citrates on the Mineral Metabolism of Preschool Children). IN PROGRESS

The citric acid metabolism of four preschool children is being studied under the following dietary conditions: a) basal diet alone; and basal diet with additions of b) ascorbic acid, c) potassium citrate, d) ascorbic acid and potassium citrate, and e) orange juice. The citric acid is determined by an adaptation of Kuyper's method, using the Van Slyke manometric apparatus. The results are incomplete, but should add to the meager information on citric acid metabolism in human subjects.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys

FOOD LIKES AND DISLIKES OF VARIOUS AGE GROUPS. K. McCluney, under direction of E. S. Eppright, Tex. State Coll. for Women. (Master's Thesis).
IN PROGRESS

The object of this study is to observe the food likes and dislikes of people at different ages. The groups under observation include elementary, grade, high school, and college boys and girls. A survey form listing foods of the different groups and providing opportunities for checking foods liked, disliked, and unfamiliar has been given each person included in the study.

A STUDY OF THE CALORIC AND PROTEIN INTAKE OF A GROUP OF PRE-SCHOOL CHILDREN. R. Lodde and M. Saurer, under direction of C. Schuck, Purdue Univ. (Master's Thesis 1941). Abstr. Jour. Home Econ. 33 (1941) p. 599. Thesis of R. Lodde on file in Purdue Univ. Library. Reported in Notes on Research No. 6, pp. 79 and 83, 1941.
COMPLETED

The purpose of the study was to investigate the calorie and protein contents of the midday nursery school meal and the relationship to the total energy and protein value of the diet for the day. Calories were determined by the use of the oxycalorimeter and protein by the Kjeldahl method for nitrogen. The average midday intake of the younger children (39-55 mo.) was 256 calories and 8.7 grams of protein; of the older children (49-58 mo.) 405 calories and 16 grams of protein. The averages for the total daily food intake were 1218 calories or 77.8 calories per kilogram and 42 grams of protein or 2.9 grams per kilogram. The midday caloric and protein intakes for the younger children were approximately 20 percent of the total; for the older group 30 percent.

A COMPARISON OF DIETS OF CHILDREN IN A SUMMER CAMP WITH THEIR HOME DIETS. J. Beck, under direction of H. Farrankop, Temple Univ. (Master's Thesis 1942)
IN PROGRESS

The purpose of the study is to compare the food intake of twenty adolescent children at a summer settlement house camp with their customary home diets and to evaluate the adequacy of the camp diet. Food intake records have been kept for a 4-day consecutive period at the camp and in the homes. The records are being analyzed for protein, calories, minerals and vitamins and compared with accepted standards.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

THE EFFECT OF A CHANGE FROM THE HOME DIET TO A MORE ADEQUATE DIET ON THE PHYSICAL STATUS OF CHILDREN AT THE KONNARACK TRAINING SCHOOL. J. McN. Boyer, under direction of M. T. Tate and M. S. Eheart, Virginia Polytech. Inst. (Master's Thesis 1942). IN PROGRESS

To measure the effect of change from the home diet to the more adequate diet of the school on the mental and physical capacities of the children the following measurements are being made: Fatigue tests, muscle coordination tests, mental tests, nutritional tests, and routine medical examinations. The children are examined in the fall as they enter school, and again in the spring when they leave. A dietary survey is made of each family before the child enters school to determine the food supply and consumption. A similar food survey is made at the school at the time the children enter. Records of the eating habits of the children and the foods purchased are being kept. In collecting these data the investigator visits in each home, interviews the homemaker, and checks upon the supplies.

THE ADEQUACY OF THE WPA SCHOOL LUNCH AS SERVED IN AN EASTERN OKLAHOMA COMMUNITY. L. H. Pinnell, under direction of H. B. Burton, Univ. Okla. (Master's Thesis 1942). IN PROGRESS

This study is to determine whether the W.P.A. School Lunch meets the needs of children. Comparison with accepted standards is being made of the W.P.A. School Lunch in one community and lunches brought by the children in another community. Food values will be calculated. Home diets and physical condition of the children will be checked. Investigations are being made at different times during the year.

FOOD SELECTION BY JUNIOR HIGH SCHOOL STUDENTS. R. M. Culotta, under direction of S. Thompson, La. State Univ. (Master's Thesis 1942). On file La. State Univ. Library. COMPLETED

This problem included a year's study of the food selection at luncheon of 20 seventh grade students who ate at the cafeteria in the Junior High School; also a detailed study was made of the entire food intake of 3 boys and 3 girls for 2 weeks. Food selections of the 20 students showed: plate lunch most frequently selected, meat preferred to fish; of beverages, milk most frequently selected; sweets not popular during fall and winter. Case studies showed protein and calcium intakes higher than the standard allowance; all cases low in phosphorus, iron slightly low, and calories about standard.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

THE DIETARY HABITS OF KANSAS COLLEGE WOMEN AS INDICATED BY DIETARY STUDIES OF THE SURVEY TYPE. M. S. Pittman, M. M. Coopridge, Kans. State Coll. (Master's Thesis). (Part of larger project, Nutritional Status of College Women). Coop: North Central States. Reported in Notes on Research No. 6, p. 80, 1941. COMPLETED

These dietary studies show the frequency distribution of certain foods in the diets of college women. Trends in eating habits of upper and lower class college women have been compared with each other and with those of 300 high school girls.

STUDY OF THE RESPONSES OF COLLEGE WOMEN ON MORNINGS WITH AND WITHOUT BREAKFAST. T. Jones, under direction of M. A. Ohlson, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

Tests of strength, endurance, coordination, and memory are given at nine and eleven on two mornings when the student is fasting and two mornings when she has consumed a fruit, cereal, milk breakfast. To date, no student has done as well fasting as after breakfast except in the memory test which has proved to be too elementary for the college level. In general, poorer test results are obtained at eleven than at nine o'clock.

A STUDY OF MENUS FOR FAMILY USE THAT INTERPRET THE DAILY DIETARY ALLOWANCES RECOMMENDED BY THE NATIONAL RESEARCH COUNCIL. M. F. Paisley, under direction of J. L. Richardson, Mont. State Coll. (Master's Thesis 1941). IN PROGRESS

The purpose of this study is to develop attractive menus, for family use, which will interpret the daily dietary allowances recommended by the Committee on Foods and Nutrition of the National Research Council (May 1941). Foods currently available in Montana and local prices current October 1, 1941, will be used. Principles of efficient home management through conservation of time, energy, fuel, and wise utilization of home equipment will be considered in preparing the menus. By using actual food products and by giving an understandable analysis of constituents, the recommendations of the National Research Council will be clarified and made more usable for the non-technical worker.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

THE FOOD CONSUMING HABITS OF INHABITANTS OF LOUISIANA. N. E. Grigsby and B. Bryson. H. J. Davis, La. State Univ., adviser. Probable date of completion 1943. IN PROGRESS

The purpose of the study is to determine the most prevalent dietary deficiencies among various groups throughout the State and how these deficiencies may be corrected. Complete records of the foods served at each meal for 1 week periods are collected through the following agencies: Farm Security Admin., Agr. Extension Div., and the State Dept. of Publ. Health. These records are being summarized according to parishes and agricultural areas and will be compared to the National Nutritional Yardstick.

Results thus far indicate that the more common dietary practices do not compare favorably with the National Nutritional Yardstick. The most common deficiencies of the diets appear to be due to inadequate use of citrus fruits and tomatoes, and fresh vegetables.

A DIETARY STUDY OF SOME SELECTED SEMINOLE INDIAN FAMILIES. E. P. Day, under direction of H. B. Burton, Univ. Okla. (Master's Thesis 1942). IN PROGRESS

The purpose of the study is to determine the adequacy and special characteristics of the diets of Seminole Indians. Names of families to be studied will be obtained from social and health workers. These workers will accompany the investigator, at least on her first visit to the homes. Foods and menus ordinarily used, special dietary customs, and diets used during festivals will be recorded. Families on different income levels will be studied. The food intake will be evaluated and compared with accepted standards.

PRESENT-DAY DIETARY HABITS OF THE PAPAGO INDIAN. W. Ross, under direction of E. M. Thompson, Univ. Ariz. (Master's Thesis 1942). On file Univ. Ariz. Reported in Notes on Research No. 6, p. 79, 1941. COMPLETED

The investigation concerned the Papago Indian dietary. Some Arizona-grown plants, including varieties of cacti, formerly widely used by the Indian are now replaced by refined foods. Analyses of 9 of these plants and recommendations for their use have been made. Home diets and school lunches of children from 12 Arizona districts were evaluated by means of home and school visits, interviews and questionnaires. Analyses were made for protein, ether-soluble extract, total calories and ash, moisture and calcium. The dietaries showed marked deficiencies in calcium and vitamins A and C. The calcium content of 6 plants was unusually high and they should be generously used.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

GEOPHAGY (DIRT EATING) AMONG RURAL NEGRO SCHOOL CHILDREN OF MISSISSIPPI. D. Dickens and R. N. Ford, Miss. State Coll. (Professional). Publ. in Amer. Jour. Sociol. 7 (1942) pp. 59-65. COMPLETED

The survey was made to determine the prevalence of dirt eating among rural negro school children in Oktibbeha County, Mississippi. The method of hiding critical words (dirt and clay) in a list of words lacking emotional tone (such as turnip greens, lean meat, soda pop) was used. 25 percent of the boys and girls in the study had eaten dirt within the 10 to 16 day interval previous to the study.

ADEQUACY OF DIETARY SERVICE IN OUACHITA COLLEGE DINING ROOM (A STUDY OF STUDENT CONSUMPTION). L. Silliman, under direction of S. Thompson, La. State Univ. Probable date of completion Summer of 1942. IN PROGRESS

A SHORT METHOD OF DIETARY ANALYSIS. E. G. Donelson and J. M. Leichsenring, Univ. Minn. (Professional). Probable date of completion April 1942. Reported in Notes on Research No. 6, p. 1, 1941. IN PROGRESS

A short method for dietary analysis is presented which is based on mean values for food groups. Calculations include calories, protein, calcium, phosphorus, iron, vitamin A, thiamine, ascorbic acid and riboflavin. The method has been demonstrated by statistical means to be highly satisfactory when applied to weekly dietary records. It is also valuable for the analysis of one day dietary records.

A STUDY OF THE FOOD INTAKE OF CAMP CHILDREN. A. P. Weiss, under direction of E. Robb, Temple Univ. (Master's Thesis 1941). On file Sullivan Memorial Library, Temple Univ. COMPLETED

The food intake of 29 adolescent boys and girls at a summer camp was investigated. A 4-day food record was kept and analyzed as to calorie, protein, mineral, and vitamin content; the average daily intake was calculated and compared with accepted standards. Results showed great individual variation in intake and indicated that the food requirements of the adolescent boy may be higher than previously supposed; that adolescent girls showed the greatest deficiencies; that minerals and vitamins are the dietary essentials to be emphasized.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

DIETARY PRACTICES OF CERTAIN WHITE AND NEGRO HIGH SCHOOL STUDENTS AT ALTON, ILLINOIS; DURING AND AFTER ENROLLMENT IN SECOND SEMESTER FOODS. M. Sidwell, under direction of M. A. Ohlson, Iowa State Coll. (Master's Thesis). On file Iowa State Coll. Library, Reported in Notes on Research No. 6, p. 79, 1941. COMPLETED

Food intake records and certain records of physical and socio-economic status were kept for 2 successive years for students enrolled in second semester foods at Alton, Illinois, High School. There was no measurable improvement in food consumption or nutritional status which could be attributed to training. In general, negro students secured a diet with more eggs, whole cereals, and vegetables than white students, even though the income level of the negro families was lower.

THE AVERAGE DAILY INTAKE OF CALORIES, PROTEIN, CALCIUM, PHOSPHORUS AND IRON OF SOME 110 JUNIOR AND SENIOR WOMEN AT OKLAHOMA A. AND M. COLLEGE, BASED ON A STUDY OF WEEKLY FOOD INTAKES. M. L. Greenwood and B. F. Newkirk, Okla. A. and M. Coll. (Professional). Probable date of completion May 1942. IN PROGRESS

To gain information in relation to the intakes of calories, protein, calcium, phosphorus, and iron by the women at Oklahoma A. and M. College and to compare the figures obtained with existing standards, data were gathered from records which were kept by the students as a part of their regular laboratory assignment in Nutrition. The figures were checked for gross errors and should be reasonably accurate for this type of data. An analysis and interpretation of the data are now in progress.

A DETERMINATION OF CALCIUM IN THE DIETS OF A COOPERATIVE HOUSE AND A DORMITORY AT OREGON STATE COLLEGE. E. A. Redelings, under direction of M. L. Fincke, Oreg. State Coll. (Master's Thesis 1942). On file Oreg. State Coll. Library. COMPLETED

The calcium intakes of 10 representative women living in a cooperative house and 10 living in a dormitory were determined by analysis of duplicate lots of all foods eaten during 1 week. The amount of milk consumed accounted for the greatest variation in intake. In the cooperative house the average intake per girl per day amounted to 0.85 gm. In the dormitory the average intake of calcium per day was 0.66 gm. None ingested as much as 0.8 gm. per day. These findings are being used as a basis for educational work.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

DIETARY HABITS OF KANSAS COLLEGE WOMEN. M. S. Pittman, N. Edelblute, and B. L. Kunerth, Kans. State Coll. (Professional). (Part of larger project, Nutritional Status of College Women). Coop: North Central States. Publ. in J. A. D. A. 17, (1941) pp. 947-954. Reported in Notes on Research No. 6, p. 81, 1941. COMPLETED

Energy, nitrogen, calcium and phosphorus intakes of 12 Kansas college women eating freely chosen diets were determined over periods ranging from 1 to 8 consecutive weeks. Differences between subjects were significantly greater than differences between periods for the same subjects. With one exception for nitrogen, the diets supplied nitrogen, calcium, and phosphorus in amounts above the Sherman standards. The mean caloric intakes were lower than the standard usually recommended for women, but body weights were maintained.

FOOD CONSUMPTION OF YOUNG COLLEGE MEN. M. D. Patton, E. Masserman and H. McKay, Ohio State Univ. (Professional). IN PROGRESS

To secure data which may be of value in a program for improving food habits of young men, the foods used by a group of from 50 to 75 men, having their meals at two university dormitories are being studied. One dormitory has a liberal food budget; the other a limited one. The foods, with amounts used by each subject, will be compared with a list of recommended foods and the approximate nutritive value of the ingested foods will be compared with the allowance for young men as recommended by the Committee of Foods and Nutrition of the National Research Council.

VITAMIN AND MINERAL CONTENT OF THE DIETS OF MEXICAN WOMEN. M. Willard, under direction of J. Winters, Univ. Texas (Master's Thesis 1942). Financed by grant from the Research Corp. of New York. IN PROGRESS

The purpose of this study is to determine the vitamin and mineral content of the diet actually consumed by a group of Mexican women. Duplicates of each day's diet are collected over a period of a week. Assays for thiamin, nicotinic acid, riboflavin and pantothenic acid are made on each day's collection. Aliquots of each day's diet are kept and mixed for analysis for calcium, phosphorus and iron. Preliminary results on a group of five women show intakes for the vitamins of less than one-half of the standard requirement.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

THE ADEQUACY AND COST OF THE FOOD OF A SELECTED GROUP OF NEGRO FAMILIES IN TRAVIS COUNTY, TEXAS. M. Christian, under direction of M. L. Giddings, State Univ. of Iowa (Master's Thesis 1941). On file, State Univ. of Iowa Library and Home Econ. Dept. COMPLETED

This study was made in order to learn something of the adequacy of the food of negro families from a very low income group. The inventory method was used in securing data from 35 families for a week's period. Each family had help in the taking of 2 inventories and in addition was visited in the middle of each week. In calculating food consumed a deduction of 15.6% was made for inedible waste. Findings showed that the cost of the food used was very low. As food expenditures rose there was a definite increase in the amounts of lean meat, eggs, and succulent vegetables used. Families producing their own milk and raising vegetables had a better diet than those who purchased everything. In general the diets were below standards for good nutrition--being most deficient in calcium and vitamins C and G, but also inadequate in protein, thiamin and vitamin A.

DETERMINATION OF THE NUTRITIVE VALUE OF PLANNED LOW-COST DIETS. R. Koenig, under direction of J. Winters and R. Leslie, Univ. Texas (Master's Thesis 1942). Coop: State Dept. Public Health, Div. of Maternal & Child Welfare. IN PROGRESS

The purpose of this study is to make actual determinations of the calorie, protein, mineral and vitamin content of planned low-cost diets (10-15 cents per day per person in 1941), calculated to be adequate, and to test the adequacy of these diets by the growth of the rat. Thiamin is being determined by the fermentometer method and riboflavin, nicotinic and pantothenic acids by microbiological technique. Calcium is being determined by the usual volumetric procedure and phosphorus and iron by spectrophotometric methods. Results show considerable difference in the growth^{rate} of rats on three diets tested. The content of the B-complex vitamins is somewhat lower than the calculated values. Other determinations have not yet been completed.

REPRODUCTION OF LOW COST TEXAS DIETS. G. Hicks, under direction of F. I. Scoular, No. Tex. State Teachers' Coll. (Master's Thesis 1942). IN PROGRESS

The purpose of this study is to determine the effect of low cost Texas diets, low in animal protein and high in vegetable protein, upon reproduction and lactation in the white rat. The basic diets used by Hunter are used in the present study with the feeding continued through the reproductive period. Animals on the low cost diets are mated not only with animals on the same diets but also with animals on a normal diet. Results indicate that pregnancy occurs with normal delivery of normal young, but there is a high mortality rate due to failure in lactation.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

THE DIETARY INTAKE OF TWENTY-FOUR CARIES-SUSCEPTIBLE INDIVIDUALS. R. L. Huenemann, under direction of L. J. Roberts, Univ. Chicago (Master's Thesis 1941). On file Univ. Chicago Library. COMPLETED

The home dietary intake of 24 caries-active children was studied for 1 year in order to determine how these dietaries compared with recommended allowances. Information was derived from interviews with mother and child and from 3 or more records secured at intervals throughout the year. Analysis of data showed that no diet consistently met the allowances recommended by the National Research Council and that low intakes occurred most frequently in ascorbic acid and vitamin D. Information obtained by interview only was found to have little quantitative value when compared with actual diet records. Comparisons between successive diet records showed significant periodic variations, so that correlation of only one diet record with a disease like dental caries involving a long period of time could not be considered a valid procedure.

CERTAIN DIETARY FACTORS IN ADOLESCENT ACNE VULGARIS. A. J. Leith, under direction of M. A. Ohlson, Iowa State Coll. (Master's Thesis 1942).
IN PROGRESS

Studies of the diet in adolescent acne have been undertaken because of the high food requirement of the age at which the condition develops and the tendency to use severely restrictive dietary means for its control. Eight students are being given a complete basic diet, fed with low, medium, and high intake of fat. Outpatients are being given the supplements without dietary control, although food intake records will be kept.

TOTAL FAMILY EXPENDITURES, TOTAL COST OF FOOD, ADEQUACY OF DIETS, AND THE PHYSICAL AND DENTAL STATUS OF CHILDREN OF VARIOUS GROUPS OF PEOPLE IN HAWAII. M. Potgieter and T. Takase Kimura, Hawaii Agr. Expt. Sta. (professional). Reported in Notes on Research No. 6, p. 81, 1941
IN PROGRESS

TOTAL VALUE OF LIVING AND ADEQUACY OF FAMILY DIETS OF 25 COFFEE FARMER FAMILIES IN HAWAII. Mrs. K. A. Nakatani, under direction of M. Potgieter, Univ. Hawaii (Master's Thesis 1945). (Part of larger project, Total Family Expenditures, Total Cost of Food, Adequacy of Diets, and Health of Children of Peoples in Hawaii).
IN PROGRESS

Families can be more easily guided in the best use of their incomes and in securing a nutritionally adequate diet if a study is first made of their spending and their eating habits. Each family in this study kept a record for four consecutive weeks of all foods consumed. This was preceded and followed by an inventory of food in the home. The most frequent and most serious dietary deficiencies in the group were inadequate intakes of calcium and of vitamin B₁. Data on the family expenditures for the past year were secured by means of a schedule.

DIET IN RELATION TO HEALTH AND DISEASE

Dietary Studies and Surveys (Continued)

FOOD CONSUMPTION OF 38 HONOLULU RELIEF FAMILIES. M. Potgieter, Univ. Hawaii and Hawaii Agr. Expt. Sta. (Professional). (Part of larger project, Family Expenditures, Cost of Food, Adequacy of Diets, and Physical and Dental Status of Children of Various Groups of People in Hawaii). Submitted for publ. as a station circular, Hawaii Agr. Expt. Sta. COMPLETED

A study of the food consumption habits of 38 relief families in Honolulu, T. H., showed that most of them were living on seriously deficient diets. The higher cost (Per capita) diets tended in general to be less seriously deficient than those that cost less. Yet not one of these diets, purchased with adequate food budgets, was completely adequate nutritionally. This shows an urgent need for nutrition education and guidance. Section II points out some errors in food purchasing made by these 38 families and gives some suggestions for securing a more adequate family diet with a restricted food budget.

Indexes of Nutrition and Nutritional Status

General

MASS STUDIES IN HUMAN NUTRITION: NUTRITIONAL STATUS OF CHILDREN IN A COLLEGE COMMUNITY. P. B. Mack, J. M. Smith, C. Logan, A. O'Brien, Pa. State Coll. (Professional). Publ. in Jour. Amer. Diet. Assoc. 18 (1942) pp. 69-82. COMPLETED

The study involved the dietary habits and nutritional status of 147 children in the intermediate grades in a college town of about 7000 population. Nine tests for nutritional status were applied. A comparison of the children in the study with those of an industrial city of low economic status was made with respect to family income, family education, responses to nutrition tests, and consumption of the main items of diet. The children in the community in which the income and educational status of the parents were higher were found to exhibit generally better nutritional status. Although the intake of certain protective foods varied with the different income groups in both communities, there was a higher intake of these foods throughout all income groups of the college community. Even in this community, all children were not in a state of optimum nutrition.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)
General (Continued)

RELATION OF SCHOOL FEEDING TO THE NUTRITIONAL CONDITION AND SCHOOL PROGRESS OF ELEMENTARY SCHOOL CHILDREN. A. M. Moser and E. J. Lease assisted by G. W. Anderson, So. Car. Expt. Sta. (Professional) Coop: W.P.A. and County and State Health Depts. Probable date of completion Spring 1943. Reported in Notes on Research No. 6, p. 101, 1941. IN PROGRESS

This project has for its objective an evaluation of the nutritional status and growth of children in two rural schools, in one of which a well-balanced noon lunch is provided. Special health examinations supplemented by laboratory tests, growth records, and information on home dietary practices are being obtained for both groups of children. Findings last year indicated that the children receiving the school lunch maintained higher blood levels of vitamin A and vitamin C during the early Spring than did those receiving no school lunch. A special study of hemoglobin levels among children of different urban and rural groups is being made this year.

FOOD CHOICES AND NUTRITIONAL STATUS OF CHILDREN OF A WIDE VARIETY OF NATIONAL BACKGROUNDS. E. Hollen, under direction of P. B. Mack, Pa. State Coll. (Master's Thesis 1942). IN PROGRESS

943 children in the anthracite region of Pennsylvania were divided into their racial groups; it was found that 107 groups were formed, with 10 or more children in 16 of the groups. The differences in food preference and nutritional status are being ascertained.

AN INVESTIGATION OF HUMAN DIETARY DEFICIENCY IN SELECTED COUNTIES OF FLORIDA WITH SPECIAL REFERENCE TO NUTRITIONAL ANEMIA IN RELATION TO THE COMPOSITION OF HOME-GROWN FOODS. O. D. Abbott, R. Overstreet and C. F. Ahmann, Fla. Agr. Expt. Sta. (professional). COMPLETED

This report deals with the nutritional status of 1610 rural children living in 3 counties in Florida. Less than 9 percent of the children were without defects. The most common defects were approximately the same as those reported previously. (Fla. Agr. Expt. Sta. Ann. Rpt. 1938, 1939, 1940, 1941) The heart defects found in nearly one-fourth of the subjects were a soft systolic murmur often associated with tachycardia. This study shows that children living in districts where the local cattle ranges were classed as healthy had higher hemoglobin values and more iron in their diets and in their home grown pot herbs than children living in districts classed as marginal or deficient.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

General (Continued)

NUTRITIONAL STATUS OF SCHOOL CHILDREN OF HICKMAN COUNTY, TENNESSEE.

L. S. Lovell, under direction of L. M. Johnson, Peabody Coll. (Master's Thesis 1943). IN PROGRESS

The purpose of this study was to ascertain the nutritional status of school children of Hickman County, Tennessee. With the aid of the county health officer, examinations of school children have been made from general health points of view. The findings are to be checked and rechecked by further examinations. To date we have found that the diet of those who showed severest malnutrition contained a high percentage of carbohydrate and that both eye and tooth defects were numerous. There was also a considerable amount of anemia as well as tonsil and heart abnormalities.

THE NUTRITIONAL STATUS OF 4-H CLUB MEMBERS AND OLDER RURAL YOUTH IN RELATION TO THE DEFENSE PROGRAM. M. L. Fincke, Oreg. State Coll. (Professional). Probable date of completion 1944. IN PROGRESS

In representative numbers of rural children in representative counties the following measurements are being made: (1) height, weight, and body width (2) ascorbic acid in blood plasma (3) hemoglobin (4) dietary records (5) dental examination. Nutritional status so far as is possible from these measurements, will be estimated.

THE NUTRITIONAL STATUS OF UNIVERSITY OF MAINE FRESHMEN GIRLS AS RELATED TO THEIR DIETS. M. M. Clayton. P. S. Green, Univ. of Maine, adviser (Professional). Probable date of completion 1945. IN PROGRESS

The procedure includes physical and dental examinations, anthropometric measurements by the McCloy, Pryor, and Hrdlicka systems, diet studies hemoglobin and red cell counts, salivary analyses for sugar (hydrolyzed mucin) and total acidity, and gross eye examinations for evidence of vitamin A deficiency. See Main Agr. Expt. Sta. Bul. 405, 1941.

THE INFLUENCE OF COLLEGE LIFE ON THE NUTRITIONAL STATUS AND ON THE FOOD HABITS OF MASSACHUSETTS STATE COLLEGE WOMEN. M. S. Gutowska and E. B. Ellms, M. D., Mass. State Coll. (Professional). Coop: Student Health Dept. IN PROGRESS

An attempt is being made to determine the nutritional condition of the Freshman group of the Mass. State College women students on the basis of standard tests. Their dietary habits are recorded through individual computations. Procedures by which the nutritional status may be determined are being studied.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

General (Continued)

A FOUR YEAR STUDY OF THE FOOD HABITS AND NUTRITIONAL STATUS OF GRADE-SCHOOL CHILDREN IN NEWPORT, MAINE. M. M. Clayton. P. S. Greene, Univ. Maine, adviser (Professional). (Part of larger project, The Food Habits and Nutritional Status of Children in Selected Communities in Maine). Probable date of completion Summer of 1943. Reported in Notes on Research No. 6, p. 89, 1941, and in Maine Agr. Expt. Sta. Bul. No. 405. IN PROGRESS

Results are being studied with the following objectives in mind: To evaluate the diets and physical condition of the group during the period of the study; to determine how the Newport children compare with those from other Maine towns where surveys have been made*; to determine how they compare with children from various parts of the U.S.: and to evaluate the McCoy method of appraising physical status by the use of anthropometric measurements.

*See Maine Agr. Expt. Sta. Bul. 401.

Anthropometric

RELATIONSHIP OF ANTHROPOMETRIC MEASUREMENTS OF HUMAN BEINGS TO CERTAIN NUTRITIONAL PROBLEMS. A. McC. Francis, under direction of P. B. Mack and J. M. Smith, Pa. State Coll. (Doctor's Thesis). IN PROGRESS

Twenty-six anthropometric measurements on each of a group of children are being calculated into sixteen indices of body build. Comparisons of the indices of different age and socio-economic groups are being made.

A COMPARISON OF BODY MEASUREMENTS OF NATIVE-BORN WHITE CHILDREN IN FOUR LOCALITIES OF TEXAS. J. Whitacre, Tex. Agr. Expt. Sta. (Professional). (Part of larger project, Study of Body Measurements for Sizing Children's Garments and Patterns). Coop: Bureau of Home Econ., U. S. Dept. Agriculture, and 13 States. Probable date of completion June 1942. Reported in Notes on Research No. 6, p. 89, 1941.

IN PROGRESS

The Texas data are being analyzed with relation to 6 occupational groups of the parents--professional, semi-professional, business, farmer, skilled labor, and common labor. Incomplete findings indicate that differences in body dimensions are more closely associated with occupational group than with region.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

Vitamin A

DARK ADAPTATION OF PRE-SCHOOL CHILDREN. M. L. McC. Wright, under direction of F. I. Scoular, No. Texas State Teachers' Coll. (Master's Thesis 1941). On file, No. Texas State Teachers' Coll. Libr.

COMPLETED

This investigation was a study of the biophotometer test determining the dark adaptation of pre-school children. 17 children from the 1940 summer play school of North Texas State Teachers' College were tested one or more times. 5 cases were discussed in detail, 3 of which showed the effect of the administration or withdrawal of vitamin A concentrate. A summary of the dark adaptation readings of all of the children was included in the appendix. These data formed the basis for the conclusion that the biophotometer test was a valid means of determining the dark adaptation of pre-school children.

FURTHER STUDIES ON THE DARK ADAPTATION OF ELEMENTARY SCHOOL CHILDREN. L. W. Gary, under direction of F. I. Scoular, No. Texas State Teachers' Coll. (Master's Thesis 1941). On file No. Texas State Teachers' Coll. Library. Reported in Notes on Research No. 6, p. 95, 1941. COMPLETED

39 children who were tested with the biophotometer in 1940 were re-tested in 1941. The vitamin A stores of most of the children were found to have increased during the year. The possibility that this change was due to a better selection of foods or to one year's increase in age was discussed.

CONTINUED DARK ADAPTATION STUDIES OF ELEMENTARY SCHOOL CHILDREN. M. Collins, under direction of F. I. Scoular, No. Tex. State Teachers' Coll. (Master's Thesis 1942). Coop. with Education Dept. IN PROGRESS

Dark adaptation determinations on second and third grade children begun in the fall of 1938 are being continued. The results will be compared with those obtained previously and evaluated according to age and sex of child and season of the year when the test was made.

DARK ADAPTATION OF CHILDREN IN RELATION TO DIETARY LEVELS OF VITAMIN A. H. Oldham and K. MacLennan. L. J. Roberts, Univ. Chicago, adviser (Professional). Submitted for publication to Jour. Pediatrics. On file Dept. of Home Econ., Univ. Chicago. COMPLETED

The dark adaptation of children from different socio-economic levels was measured with the Hecht adaptometer and rod thresholds were found to have no correlation with vitamin A intakes calculated from dietary studies, although a number of children were receiving less than 20 I. U. per kg. per day. Approximately the same percent from each level showed defective dark adaptation. 50 matched pairs were retested after one of each pair had received vitamin A supplementation for 9 weeks. Significant improvement was found in only 11 experimental as against 6 control subjects. The effect was most pronounced in those with high initial rod thresholds.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)
Vitamin A (Continued)

THE VITAMIN A STATUS AND THE RESPONSE TO DARKNESS ADAPTATION TESTS OF HIGH SCHOOL GIRLS. A. M. Lawson, under direction of J. M. Smith & P. B. Mack, Pa. State Coll. (Master's Thesis 1941). COMPLETED

A small group of high school girls, together with their families were tested by means of the series of nutrition tests ordinarily used in the Pennsylvania mass studies in human nutrition. As a part of this study the girls were tested twice a week for a period of time with both the biophotometer and the Hecht adaptometer. After ascertaining their darkness adaptation levels and the vitamin A content of their freely chosen diets, they were given intensive personal instruction on the importance of vitamin A in the diet and its presence in certain foods. Throughout the period of instruction, they continued to be tested for darkness adaptation as in the earlier period. The girls were then given vitamin A concentrates for a period of time, with a continuance of photometric tests. It was found that the vitamin A content of the diet and the response to the tests increased significantly during the period of instruction. In general, the darkness adaptation, as measured by the biophotometer and the Hecht adaptometer, reflected the vitamin A intake.

DARK ADAPTATION OF FRESHMAN HIGH SCHOOL GIRLS AND BOYS. O. A. Williams, under direction of F. I. Scoular, No. Texas State Teachers' Coll. (Master's Thesis 1941). On file No. Texas State Teachers Coll. Library. Reported in notes on Research No. 6, p. 96, 1941. COMPLETED

This study was based on a series of tests with the biophotometer to determine the effect, if any, of seasonal variation in diet on the dark adaptation of 25 freshmen girls in the Home Making Class of the Grapevine High School, Grapevine, Texas. Tests were given in September, January, and May under the ordinary living conditions of the girls and without any effort to change these conditions. In addition a group of 25 boys was tested in May. The results of this study indicated that seasonal variation in dark adaptation was due to seasonal variation in diet.

EFFECT OF DIETARY VITAMIN A UPON THE DARK ADAPTATIONS OF COLLEGE STUDENTS DURING THE SPRING MONTHS OF THE YEAR. L. Lewis, under direction of F. I. Scoular, No. Texas State Teachers' Coll. (Master's Thesis 1942). IN PROGRESS

The purpose of this study is to determine if an added dietary source of vitamin A has any effect upon the dark adaptations of college students during the spring of the year when the diets are already higher in vitamin A.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional status (Continued)

Vitamin A (Continued)

A THREE MONTHS' STUDY OF THE DARK ADAPTATION OF A TEXAS FAMILY DURING ACTIVITY. A. M. Wade, under direction of F. I. Scoular, No. Texas State Teachers' Coll. (Master's Thesis 1941). Publ. in Abstracts of Dallas Meeting of Amer. Zool. Soc., Div. Physiol. On file No. Texas State Teachers' Coll. Library. Reported in Notes on Research No. 6, p. 96, 1941. COMPLETED

This study was conducted over a period of 10 weeks on a family of 9 ranging in age from 13 to 52. The subjects were tested for dark adaptation with the biophotometer before and after 1-1/2 hours of strenuous activity in the sun. It was found that when the subjects were receiving vitamin A in a concentrated form or from diets high in vitamin A the difference between the morning reading before activity and the afternoon reading after activity was less. The older subjects of this study had poorer dark adaptation than the younger subjects.

NUTRITIONAL ADEQUACY OF NATIVE WEST VIRGINIANS. H. C. Cameron, W. Va. Agr. Expt. Sta. (Professional). Reported in Notes on Research No. 6, pp. 99-100, 1941. IN PROGRESS

In continuation of the work previously reported biophotometer tests were made on 100 students (male and female) in September and October. None in the group was found to be low, or borderline. This corresponds with the findings for 1940-41, when tests were made in November and December on the girls, and in January, February and March on the men. This year tests were done early in the fall to test the effect of season and length of time on college diets. Figures for 1939-40 had shown 15% of men low and borderline, and 5% of girls, but these tests had been taken in November, December and January. The better showing with respect to biophotometer tests for the past two years would seem not to be related to the season or length of time on the college diet, but perhaps to changes in the instrument or to better home diets resulting from the educational campaign for more protective foods.

Vitamin B₁

FURTHER STUDIES ON THE THIAMIN AND PYRIMIDINE EXCRETION OF OLDER PEOPLE. A. W. Wertz and E. C. Weir. H. S. Mitchell, Mass. State Coll., adviser (Professional). (Part of larger project, Vitamin Requirements of Older People). Reported in Notes on Research No. 6, p. 105, 1941. IN PROGRESS

Elderly people of a low income group consuming inadequate diets are chosen as subjects for this study. Electrocardiograms, hemoglobin determinations, red cell counts, and urinary thiamin and pyrimidine values are secured with the subjects on their customary inadequate diets. These are compared with results obtained after the subjects have been given thiamin chloride and later the vitamin B complex. Both the fermentation and thiochrome methods for thiamin are being used.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

Vitamin B₁ (Continued)

THE EXCRETION OF PYRUVIC ACID IN RELATION TO THE LEVEL OF THIAMIN INTAKE. M. Threlkeld, under direction of J. Outhouse, Univ. Ill. (Master's Thesis). (Part of larger project, Methods for Determining Nutritional Status in Respect to Thiamin). IN PROGRESS

The purpose of the study is to determine whether or not the quantity of pyruvic acid excreted by college students is influenced by the amount of thiamin ingested. Pyruvic acid is being determined by the phenylhydrazine method.

FACTORS WHICH AFFECT THIAMIN EXCRETION IN CHILDREN BEFORE AND AFTER A TEST DOSE. B. Blum and H. Oldham, under direction of L. J. Roberts, Univ. Chicago (Master's Thesis 1942). IN PROGRESS

We are studying the relationship of thiamin excreted to that ingested; the constancy of thiamin excretion on a constant intake; the adequacy of a four hour as compared to a twenty-four hour collection period after a test dose and the effect of thiamin supplementation on the amount of the test dose returned.

Vitamin C.

FOOD HABITS AND NUTRITIONAL STATUS IN REGARD TO VITAMIN C OF COLLEGE WOMEN IN OKLAHOMA. W. Armstrong, Okla. A. & M. Coll. (Professional) (Part of larger project, Nutritional Status of College Women). Coop: North Central States. Probable date of completion July 1942. IN PROGRESS

In this study of the nutritional status of Oklahoma A and M. College women with respect to vitamin C, one hundred women are serving as subjects. Each subject keeps a dietary record for one week, at the beginning and end of which the plasma ascorbic acid is determined. On the basis of the results, the women are divided into three groups representing low, average and high values. The subjects in each group supplement their ordinary diets with graded doses of pure ascorbic acid. The level of plasma ascorbic acid, as well as food habits, is followed during this period.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

Vitamin C (Continued)

THE VITAMIN C STATUS OF KANSAS COLLEGE WOMEN. L. Ascham, Kan. State Coll. (Professional). (Part of larger project, Nutritional Status of College Women). Coop: North Central States. Probable date of completion - One year or more. IN PROGRESS

The purpose of this study is to determine the ascorbic acid content of the blood plasma of college women. The micro method of Abt and Farmer is being used. To date, 160 home economics students of junior and senior ranking have been tested. Data regarding vitamin C food habits and place where meals are taken have been included for each person. About 1/3 of the values for blood ascorbic acid are below 0.5 mg. per 100 cc blood, and approximately 20 percent between 0.5 mg. and 0.7 mg. leaving slightly less than half above the level at present accepted as normal.

NUTRITIONAL STATUS OF COLLEGE WOMEN: VITAMIN C STUDIES. E. Donelson and D. Grambow, Univ. Minn. (Professional). (Part of larger project, Nutritional Status of College Women). Coop: North Central States. Probable date of completion 1943. IN PROGRESS

The level of vitamin C of the blood plasma of college women is investigated in relation to their dietary habits. The Farmer and Abt titration method is employed.

THE ASCORBIC ACID METABOLISM OF COLLEGE STUDENTS. M. L. Fincke and P. Carpenter, Oreg. State Coll. (Professional). (Part of larger project, The Ascorbic Acid Metabolism of College Students). Coop: Northwest Cooperative Project. Probable date of completion 1942. Reported in Notes on Research No. 6, p. 75, 1941. IN PROGRESS

This is a continuation of the project previously described, Blood plasma ascorbic acid determinations are made on two non-consecutive mornings on representative men students from different living groups. Findings show that men students in general have lower plasma values than women students.

THE ASCORBIC ACID METABOLISM OF COLLEGE MEN. E. Woods, Univ. Idaho, (Professional). (Part of larger project, The Ascorbic Acid Metabolism of College Students). Coop: Northwest Cooperative Project. Probable date of completion June 1942. Reported in Notes on Research No. 6, p. 74, 1941. IN PROGRESS

This study of nutritional status of college men involves the determination of ascorbic acid in blood plasma by the microtitration method of Farmer and Abt. Men from 8 different boarding places including University dormitories, cooperatives, fraternities, homes and "batching" quarters have been tested and so far very few cases have been found with values above 0.8 mg. and many are below 0.4 mg. of ascorbic acid per 100 ml. of blood plasma. The results indicate a need for a larger intake of ascorbic acid by many men students.

DIET IN RELATION TO HEALTH AND DISEASEIndexes of Nutrition and Nutritional Status (Continued)
Vitamin C (Continued)

ASCORBIC ACID METABOLISM OF COLLEGE STUDENTS. A. P. Brown and F. Moser, Utah Agr. Expt. Sta. (Professional). (Part of larger project, The Ascorbic Acid Metabolism of College Students). Coop: Northwest Cooperative Project. Reported in Notes on Research No. 6, p. 74, 1941. IN PROGRESS

Measurements of blood plasma ascorbic acid levels have been made by the Farmer and Abt micro method on 97 women students and 19 men students. Of the women students 26.8% had blood plasma ascorbic acid levels of 1.00 or more mgms. per 100 ml. of plasma; 8 men students had levels below 0.4 mg. Measurements of basal metabolic rate, blood pressure and capillary resistance have also been made. Statistical analyses to determine possible relationships are in progress.

THE NUTRITIONAL STATUS OF COLLEGE WOMEN AS RELATED TO THEIR DIETARY HABITS WITH PARTICULAR REFERENCE TO VITAMIN C. E. L. Batchelder, R. I. State Coll. (Professional). Publ. in Jour. Nutr. 23 (1942) pp. 399-408. COMPLETED

THE BLOOD PLASMA ASCORBIC ACID OF ADULTS. M. E. Ensminger, under direction of J. McIntosh, Wash. State Coll. (Master's Thesis). IN PROGRESS

This study was outlined for the purpose of surveying the blood ascorbic acid levels of adults (21 years and over) living under uncontrolled home conditions of nutrition. The results may be combined with those of similar studies carried on in other parts of Washington or the Northwest. The procedure has included the acquisition of suitable subjects and the determination of ascorbic acid in blood samples secured on two different mornings. The Farmer and Abt micro method has been used.

Basal Metabolism

THE BASAL METABOLISM OF CHILDREN OF NURSERY SCHOOL AGE. N. D. Bavousett, M. W. Lamb, and J. McCrery, Tex. Technol. Coll. (Professional). IN PROGRESS

The purpose of the study is to add to existing data on the basal metabolism of nursery school children, and thereby to assist in the development of more adequate standards for this age group. The basal metabolism of a selected group of healthy nursery school children is being determined by indirect calorimetry. Two consecutive determinations are made on each of two different mornings. The lowest and those within five percent are averaged for the basal oxygen consumption. Results show considerable individual variation. Existing standards appear to be inadequate.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

Basal Metabolism (Continued)

BASAL METABOLISM OF GIRLS DURING THE PRE-PUBESCENT PERIOD. Sister Donata Bissetti, under direction of M. S. Pittman, Kansas State Coll., (Master's Thesis 1942) IN PROGRESS

The basal metabolism of 24 normal girls, 10, 11, and 12 years of age, has been followed over a period of 5 months. Determinations have been made every 2 weeks. Results for the three age groups will be compared statistically and any individual variation noted. Results will be compared with those of other workers.

THE BASAL METABOLISM OF NORMAL COLLEGE MEN. M. W. Lamb, N. D. Bavousett, L. Reed. J. McCrery, Tex. Technol. Coll. adviser (Professional). IN PROGRESS

To supplement existing data on standards and to ascertain the effect of altitude on basal metabolic rate, basal metabolism determinations with the Benedict-Roth apparatus are being made on a group of college men from 18 to 23 years of age who have lived at an altitude of from 2600 to 3800 feet for at least six months. Indications are that the current standards are high. Further data are necessary before definite statements can be made as to the effect of altitude.

VARIABILITY IN BASAL METABOLISM OF YOUNG WOMEN. H. McKay and M. B. Patton, Ohio State Univ. (Professional). (Part of larger project, Nutritional Status of College Women). Coop.: North Central States. IN PROGRESS

The purpose of the study is to obtain weekly basal metabolism records for 3 young women during a period of about 1 year and to determine the variability from week to week and from season to season. The findings will be compared with corresponding findings from several other states in the same region. They should be of value in deciding whether normal standards should be set up for individual states or whether data from the various states should be combined in the formulation of standards.

THE BASAL METABOLISM OF COLLEGE WOMEN OF KANSAS. B. L. Kunerth, D. Cederquist and M. Geddes. M. S. Pittman, Kans. State Coll., adviser (professional). (Part of larger project, Nutritional Status of College Women). Coop.: North Central States. Reported in Notes on Research No. 6, p. 75, 1941. IN PROGRESS

Basal metabolism tests on 2 freshmen women have been made at almost weekly intervals since October 1940. The tests will be continued as long as the women remain in college, in order to determine any seasonal or other variability. 16 college women studied previously have been re-tested this year. Two 10-year-old girls are being tested weekly. It is hoped to continue these tests through the adolescent period at least. The numbers in age brackets above 22 years have been increased.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

Mineral and Nitrogen

CALCIUM, PHOSPHORUS, AND NITROGEN METABOLISM OF YOUNG WOMEN. H. McKay and M. B. Patton, Ohio State Univ. (Professional). (Part of larger project, Nutritional Status of College Women). Coop.: North Central States. IN PROGRESS

The purpose of this study, data for which were contributed from Iowa, Kansas, Nebraska and Ohio, was to analyze the data statistically, and combining such data as could be suitably combined, to determine what figures might be used in establishing standards of intake. Results indicate that an intake of from 0.8 to 1 gram of calcium is desirable for young women of the age group studied.

THE MINERAL AND NITROGEN METABOLISM OF COLLEGE WOMEN. R. M. Leverton. M. Fedde, Univ. Nebr., adviser (Professional). (Part of larger project, Nutritional Status of College Women). Coop.: North Central States. Probable date of completion June 1942. IN PROGRESS

One hundred studies of the mineral and nitrogen metabolism of girls between the ages of 16 and 25 years have been completed. The data are being prepared for publication in an Experiment Station Research Bulletin.

THE INTAKE AND UTILIZATION OF THE FOOD OF A SELECTED GROUP OF COLLEGE WOMEN. M. S. Pittman, N. Edelblute and B. L. Kuerth, Kans. State Coll. (Professional). (Part of larger project, Nutritional Status of College Women). Coop.: North Central States. Reported in Notes on Research No. 6, p. 81, 1941. IN PROGRESS

Chemical analyses have been completed for studies of the nitrogen, calcium, and phosphorus metabolism of 2 healthy freshmen college women on controlled diets containing varying amounts of milk, and with or without supplements of vitamin D.

Blood constituents

A COMPARISON OF THE HEMOGLOBIN CONCENTRATION AND ERYTHROCYTE COUNT OF THE BLOOD OF COLLEGE MEN AND WOMEN IN MISSISSIPPI. O. Sheets and L. McHirter, Miss. State Coll. (Professional). Probable date of completion 1942. Reported in Notes on Research No. 6, p. 98, 1941. IN PROGRESS

This study is being made to determine the prevalence of anemia among college students in Mississippi and to determine whether it is more prevalent among college women than among college men. Hemoglobin determinations and erythrocyte counts have been made on the blood of about 600 college men and the same number of college women. It was found that about 33 percent of the girls had a hemoglobin below 12 gms., and about 29 percent of the boys a hemoglobin below 14 gms. per 100 cc of blood. Further tests are being made to check these results.

DIET IN RELATION TO HEALTH AND DISEASE

Indexes of Nutrition and Nutritional Status (Continued)

Blood constituents (Continued)

THE BLOOD PICTURE OF COLLEGE WOMEN LIVING IN KANSAS. D. Cederquist, M. S. Pittman, Kans. State Coll., adviser (Professional). (Part of larger project, Nutritional Status of College Women). Coop.: North Central States. Probable date of completion 1942. Reported in Notes on Research No. 6, p. 99, 1941. IN PROGRESS

Hemoglobin, red cell count, and red cell volume have been determined on 86 college women. Of these, 41 have been tested for 3 consecutive years and 45 for 2 years.

NUTRITIONAL STATUS OF IOWA STATE COLLEGE WOMEN VII. HEMOGLOBIN STUDIES ON 42 COLLEGE WOMEN RECEIVING CERTAIN DIETARY SUPPLEMENTS. K. E. Davis under direction of M. A. Ohlson, Iowa State Coll., (Master's Thesis 1942). (Part of larger project, Nutritional Status of College Women). Coop.: North Central States. IN PROGRESS

Previous work in this laboratory has indicated that young women with no other evidence of disease have wider distribution of hemoglobin levels than would be inferred from the literature. This study is concerned with the food intake of women with low, medium and high "normal" hemoglobin levels and the effect at each level of certain food supplements. Data are being secured on intra-individual variability before dietary supplements are given. It is hoped that data on the value of the hemoglobin, red blood count, and cell volume tests as a measure of nutritional status will be obtained.

HEMOGLOBIN VALUES IN PENNSYLVANIA MASS STUDIES IN HUMAN NUTRITION. P. B. Mack, J. M. Smith, C. H. Logan, A. T. O'Brien, Pa. State Coll. (Professional). Publ. in Milbank Mem. Fund Quart. 19 (1941) pp. 282-303. COMPLETED

This is a report of the hemoglobin values obtained for 2400 subjects in a mass study in human nutrition carried on in Pennsylvania from 1935 until 1940. One hundred urban families composed of 418 persons, and one hundred rural families with 490 members were studied, in addition to 1492 school children in four typical communities. Values for rural subjects were found to be more nearly uniform than those for urban subjects, although even in the former group, women of child-bearing age averaged lower than is desirable. Children of preschool age in the urban families were much lower than those in the same age groups among the rural families. Increased hemoglobin values are generally associated with improved nutritional status. Children in an economically depressed industrial community were found to have exceptionally low hemoglobin values.

DIET IN RELATION TO HEALTH AND DISEASE

Requirements

General

STUDIES ON THE NUTRITIONAL REQUIREMENTS OF THE GUINEA PIG. M. R. Winkelman, under direction of A. F. Morgan, Univ. Cal. (Master's Thesis 1942). IN PROGRESS

A study of the food factors in addition to the known vitamins necessary to maintain the guinea pig by a simplified diet.

Vitamin A

VITAMIN A METABOLISM IN HUMAN SUBJECTS. E. L. Batchelder and J. C. Ebbs, R. I. State Coll. (Professional). IN PROGRESS

Four subjects are being kept on a vitamin A-free diet and their dark adaptation measured at frequent intervals by the Rhodometer test. On the basis of results of similar tests on three subjects last spring, it is expected that the minimum amount of vitamin A necessary to maintain normal dark adaptation will be less than 5500 I. U. daily. Smaller doses are now being tried. Other methods of detecting early vitamin A deficiency are also being sought.

Vitamin B₁

THIAMIN AND PYRIMIDINE STUDIES OF OLDER SUBJECTS. A. W. Wertz. H. S. Mitchell, Mass. State Coll., adviser (Professional). (Part of larger project, Vitamin Requirements of Older People). Publ. in Proc. Soc. Exp. Biol. & Med. 48, 1941, pp. 259-263. Reported in Notes on Research No. 6, p. 105, 1941. COMPLETED

The response of 8 elderly subjects to thiamin therapy was studied, as a first step in the problem of determining the daily requirement of this vitamin by older people. The thiamin and pyrimidine content of the urine was measured before and after administration of graded doses of thiamin chloride. The fermentation method was used. There was some indication of sex difference in the excretion of thiamin, but not in pyrimidine. The response of this age group was similar to that of younger people. "Retention", calculated as thiamin intake minus thiamin plus pyrimidine excreted, was more nearly proportional to intake than was the amount excreted.

DIET IN RELATION TO HEALTH AND DISEASE

Requirements (Continued)

Vitamin C

THE VITAMIN C METABOLISM OF PRESCHOOL CHILDREN. F. L. Meyer, under direction of M. L. Hathaway, N. Y. State Coll. Home Econ., Cornell Univ. (Doctor's Thesis 1942). (Part of larger project, Studies on the Influence of Ascorbic Acid and of Citrates on the Mineral Metabolism of Preschool Children). IN PROGRESS

Further data are being collected on the vitamin C requirement of preschool children, the time required to reach saturation following a period of slightly low intake, and the effect on the vitamin C elimination of changes in urinary pH. The procedure and methods used are similar to those used for the past two years. These data will add to our knowledge of vitamin C requirements, and factors affecting this requirement in normal children.

ASCORBIC ACID REQUIRED FOR MAINTENANCE OF NORMAL BLOOD LEVELS IN CHILDREN. P. Shelby, under direction of M. H. Brookes, Univ. Chicago (Master's Thesis 1941). On file Library, Univ. Chicago. COMPLETED

In order to determine the amount of ascorbic acid necessary to maintain desirable blood plasma levels, a controlled study was made on 30 institutional girls, aged 6 to 12 years, arranged in 6 matched groups. Following a short period on a restricted diet each group received daily supplements of ascorbic acid of 10 to 60 mg. in addition to the amount in the diet which averaged 22 mg. The blood plasma levels were determined weekly by the Farmer and Abt method. A total intake of 62 mg. was the minimum at which blood plasma levels were raised to 0.7 mg. percent. 60 mg. of ascorbic acid daily was taken as a safe dietary allowance for this group.

ASCORBIC ACID REQUIREMENT OF PREADOLESCENT GIRLS. M. M. Koch, under direction of M. H. Brookes, Univ. Chicago (Master's Thesis 1941). On file Univ. Chicago Library. COMPLETED

Saturation tests, as determined by a 50 percent return in the urine of a 300 mg. test dose of ascorbic acid, were made on 30 preadolescent girls of ages 6 to 12 years. The subjects were arranged in 6 matched groups and had been receiving controlled amounts of vitamin C. The subjects receiving 31 and 41 mg ascorbic acid were all unsaturated. 60 percent of those receiving 51 mg. and 80 percent of those on the 61 and 81 mg. levels were saturated, while all of those receiving 71 mg. were saturated. The results were interpreted as setting as safe, a level of intake of 60 to 70 mg. per day.

DIET IN RELATION TO HEALTH AND DISEASE

Requirements (Continued)

Vitamin C (Continued)

DETERMINATION OF THE ASCORBIC ACID INTAKES NECESSARY TO MAINTAIN AN ADEQUATE LEVEL OF THE VITAMIN IN THE BLOOD PLASMA. V. L. Landquist, under direction of M. L. Fincke, Oreg. State Coll. (Master's Thesis 1941). Publ. in Jour. Nutr. 23 (1942) pp. 483-490. On file Library Oregon State Coll. COMPLETED

The daily intake of ascorbic acid necessary to maintain a blood plasma level of 0.8 mg. ascorbic acid per 100 ml. has been determined for 5 subjects. Daily determinations of ascorbic acid in blood plasma were made by the Farmer and Abt micro titration method with subjects on a constant intake of ascorbic acid. The intakes necessary to maintain this level were approximately 38, 49, 61, 69, and 89 mg. respectively, or 0.8 to 1.2 mg. per kilogram body weight.

THE DAILY INTAKE OF ASCORBIC ACID REQUIRED TO MAINTAIN TISSUE SATURATION. M. L. Fincke and V. L. Landquist, Oreg. State Coll. (Professional). (Part of larger project, The Ascorbic Acid Metabolism of College Students). Coop.: Northwest Cooperative Project. Publ. in Jour. Nutr. 23 (1942) pp. 483-490. COMPLETED

A study was made of the daily intake of ascorbic acid necessary to maintain tissue saturation in 3 subjects, as measured by blood plasma ascorbic acid levels. Excretion of ascorbic acid in response to a test dose was also measured. The required intakes were 111, 111 and 131 mg. respectively, corresponding to 1.7, 1.8 and 2.0 mg. per kilogram body weight per day.

THE EFFECT OF EXERCISE ON ASCORBIC ACID REQUIREMENTS. P. Carpenter, under direction of M. L. Fincke, Oreg. State Coll. (Master's Thesis 1942). (Part of larger project, The Ascorbic Acid Metabolism of College Students). Coop: Northwest Cooperative Project. IN PROGRESS

Three subjects are placed on a constant diet of known ascorbic acid content. In one period of 9 days the activity is reduced to a minimum and in a second experimental period, an hour and a half of hard exercise such as handball, riding a bicycle or badminton is added to the usual student activities. Blood plasma ascorbic acid levels are measured daily as index of state of nutrition.

DIET IN RELATION TO HEALTH AND DISEASE

Requirements (Continued)

Vitamin C (Continued)

STUDIES OF THE URINARY EXCRETION OF ASCORBIC ACID AND THE CONCENTRATION OF ASCORBIC ACID IN THE PLASMA OF NORMAL ADULTS DURING PERIODS ON CONTROLLED INTAKE. C. A. Storvick. H. M. Hauck, N. Y. State Coll. Home Econ., adviser (Doctor's Thesis 1941). (Part of larger project, Studies on the Vitamin C Metabolism of Human Beings). Publ. in Jour. Nutr. 23 (1942) pp. 111-123. Reported in Notes on Research No. 6, pp. 74-75, 1941. COMPLETED

Urinary excretion of ascorbic acid and fasting plasma ascorbic acid values were determined daily in 6 normal adult subjects, 2 men and 4 women, during 21 twenty-eight-day periods on controlled intakes of ascorbic acid. In general, lower urinary and plasma ascorbic acid values were observed on the lower levels of intake but there were marked variations in the same subject from day to day, and between individual subjects. As estimated from the test dose responses, approximately 75 to 160 mg. of ascorbic acid were required by the subjects in this study to maintain tissue saturation.

VITAMIN C REQUIREMENTS FOR TISSUE SATURATION IN NORMAL ADULTS. J. D. Sanford, under direction of H. M. Hauck, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis). (Part of larger project, Studies on the Vitamin C Metabolism of Human Beings). Reported in Notes on Research No. 6, pp. 74-75, 1941. IN PROGRESS

Vitamin C requirements for tissue saturation in normal adults are being studied using methods previously published. The two women subjects who have been studied this year require in the neighborhood of 75 to 90 mg. of ascorbic acid daily for tissue saturation.

A COMPARISON OF ASCORBIC ACID UTILIZATION IN PREGNANT AND NON-PREGNANT WOMEN. G. S. Bodenhamer, under direction of H. L. Gillum, Univ. Cal. (Master's Thesis 1942). (Part of larger project, Metabolic Studies on Humans). IN PROGRESS

To determine what difference, if any, exists in the plasma ascorbic acid levels of pregnant and non-pregnant women on a similar intake of ascorbic acid, the subjects are placed on a diet low in ascorbic acid, supplemented with orange juice sufficient to bring the total to an average of 100 mgm. per day. Determinations are made by the Mindlin-Butler method at weekly intervals for six weeks for the controls and from 12 to 20 weeks for the pregnant subjects.

DIET IN RELATION TO HEALTH AND DISEASE

Requirements (Continued)
Vitamin C (Continued)

HUMAN REQUIREMENTS FOR ASCORBIC ACID AND VARIATIONS PRODUCED BY OTHER DIETARY CONSTITUENTS. H. J. Purinton, under direction of C. Schuck, Purdue Univ. (Doctor's Thesis). IN PROGRESS

The purpose of the investigation is (1) to correlate blood and excretion levels of ascorbic acid as a means of determining normal requirements and recognizing deficiency states; (2) to study relationships of ascorbic acid to other dietary constituents and to certain metabolites, with the hope of obtaining more information on the role of ascorbic acid in the body. Both animal and human subjects are being used. Determinations of ascorbic acid and citric acid, one of the substances being considered for metabolic relationships, are being made by the use of the Evelyn photoelectric colorimeter.

Minerals

THE IRON REQUIREMENT OF CHILDREN OF THE EARLY SCHOOL AGE. F. A. Johnston, under direction of L. J. Roberts, Univ. Chicago (Doctor's Thesis 1941). Publ. in Jour. Nutr. 23 (1942) pp. 181-193. COMPLETED

The iron requirement of children was studied with the use of a normal hemoglobin level as the criterion of adequacy. The hemoglobin levels of 21 children 8-11 years of age were determined. A chemical analysis of the food showed that an intake of 11.4 mg. or 0.35 mg. per kg. of iron was sufficient to produce a good hemoglobin level if the rest of the diet was adequate. After 2 or 4 milligrams of additional iron per day were given for 7 mo. the hemoglobin levels did not rise. Therefore a higher iron intake was not needed. Lower levels might have been found sufficient had they been tried.

IRON METABOLISM OF NORMAL PRE-SCHOOL CHILDREN. T. Porter. M. Lye, Mich. State Coll., adviser. Publ. in Jour. Nutr. 21 (1941) pp. 101-113. COMPLETED

The iron metabolism of 4 normal pre-school children was studied for a period of 63 days. The children were fed a constant, weighed diet including milk, meat, eggs, fruits, vegetables and cereals. The average quantity of iron in the diets was found to be 5.64 mg. per child per day. The storage of iron represented about 22 percent of the intake of iron.

DIET IN RELATION TO HEALTH AND DISEASE

Requirements (Continued)

Minerals (Continued)

A CONTRIBUTION TO THE KNOWLEDGE OF THE IRON AND COPPER NEEDS OF CHILDREN. Yi Hsein Hi, under direction of R. Blair, Univ. Chicago (Master's Thesis 1941). On file Univ. Cal. Library. COMPLETED

This study was undertaken in order to add to our knowledge of iron and copper needs of children. The weighed food intakes of 475 normal healthy boys and girls 2 to 19 years old were calculated to determine their iron and copper content. The results were analyzed by age and sex on total, per kilogram and per centimeter bases. On the total basis--the one most often used--the findings were: iron, preschool 7.6, school age 11.7, adolescent boys 19.2, adolescent girls 11.1 mgs. Copper intakes for the same ages were 0.81, 1.33, 2.57 and 1.31 mgs. respectively.

Diseases

Anemia

THE EFFECT OF LIVER ON THE NUMBER, SIZE, VOLUME AND HEMOGLOBIN CONTENT OF THE ERYTHROCYTES IN HEMORRHAGIC ANEMIA. J. M. Leitchsenring and A. Biester, Univ. Minn. (Professional). (Part of larger project, Relation of Diet to Blood Formation and Regeneration). Probable date of completion 1942. Reported in Notes on Research No. 6, p. 107, 1941.

IN PROGRESS

The purpose of the study and the general procedure are described in No. 6, p. 107, 1941. The most satisfactory responses in the series for hemoglobin and red cell volume regeneration or for individual cell volume were obtained with the synthetic ration supplemented with autoclaved liver. On the other hand, red cell diameter measurements showed the poorest response with autoclaved liver. These comparisons have been shown to be statistically valid. Apparently changes in red cell diameter are not governed by the same factors that control hemoglobin production or the total and individual cell volume.

DIET IN RELATION TO HEALTH AND DISEASE

Diseases (Continued)

Toxemias

PROTHROMBIN TIME IN PREGNANT RATS FED A DIET CONTAINING DRIED AUTOCLAVED PORK MUSCLE. F. A. Pressley, under direction of P. P. Swanson, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library.
COMPLETED

The prothrombin time, determined by Kato's microprothrombin test was studied in 38 reproducing rats fed either the control stock diet, the pork diet, or the pork diet supplemented with vitamin K and bile salts. In addition the blood of 14 virgin control rats was tested. A drop in prothrombin time continuing until after the birth of the litter was noted in the normal gestations. No deviation from normal was noted in the pork-fed rats that did not develop the pregnancy disease; this was also true of the rats fed vitamin K. However, when toxemia appeared prothrombin times ranged from 32 to 300 seconds (control, 25 seconds). Thus, it seems that a prothrombin abnormality is not an etiologic factor in the pork syndrome; instead it enters as a complicating symptom producing the fatal hemorrhage.

CONCENTRATION OF SUGAR IN BLOOD OF PREGNANT RATS FED A DIET CONTAINING DRIED AUTOCLAVED PORK MUSCLE. F. Pen Ho. P. P. Swanson, Iowa State Coll., adviser (Doctor's Thesis 1941). On file Iowa State Coll. Library. Reported in Notes on Research No. 5, p. 95, 1940.
COMPLETED

It was found that pregnancy per se lowered the concentration of sugar in the blood; that the greater the number of living feti in the uterus, the lower was the concentration of sugar in the maternal blood; that the level of blood sugar remained normal in rats fed the pork-containing diet until the 21.5 day of gestation even though the concentration of glycogen in the liver was subnormal (See Farrankop study).

DISTRIBUTION AND PARTITION OF FATS IN CERTAIN TISSUES OF RATS FED A DIET CONTAINING DRIED AUTOCLAVED PORK MUSCLE. E. Wilcox. P. P. Swanson, Iowa State College, adviser (Doctor's Thesis 1942). Reported in Notes on Research No. 5, p. 96, 1940.
IN PROGRESS

In addition to the analysis described in earlier issues of Notes on Research, total fatty acids, phospholipids, and total cholesterol are being determined in the blood of pregnant rats reared upon an adequate control ration and the experimental pork diet, respectively. This study seems important since a fatty liver appears to be the most consistent abnormality observed in all rats fed the pork diet, whether or not toxemic pregnancy develops.

DIET IN RELATION TO HEALTH AND DISEASE

Diseases (Continued)

Toxemias (Continued)

GLYCOGEN IN MATERNAL AND FETAL LIVERS OF RATS FED A DIET CONTAINING DRIED AUTOCLAVED PORK MUSCLE. H. E. Farrankop. P. P. Swanson, Iowa State Coll. adviser (Doctor's Thesis 1941). On file Iowa State Coll. Library.
Reported in Notes on Research No. 5, p. 95, 1940. COMPLETED

Both the absolute and relative amounts of glycogen present in the livers of the pregnant control rats maintained on the stock diet was significantly higher than that in the livers of the pregnant pork-fed group. The quantity of liver glycogen was lower in pregnant than in virgin rats. Mothers reared on the stock diet were able to produce relatively more fetal hepatic tissue and to store more glycogen therein than were the rats fed the meat diet. Animals that developed typical "toxic" symptoms showed no liver glycogen. The derangement of carbohydrate metabolism noted in all pregnant rats given the pork diet on the twenty-first day of pregnancy becomes acute whenever an eclamptic condition develops.

EFFECTS OF FEEDING A DIET CONTAINING DRIED AUTOCLAVED PORK MUSCLE ON KIDNEY FUNCTION IN PREGNANT RATS. D. P. Lefebvre, under direction of P. P. Swanson, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

Kidney function was measured by the ability of the organ to concentrate urine and to withhold albumin. Using a total of 22 rats it was found that the protein excretion per 100 cc. of urine and specific gravity were nearly identical in the two groups. However, the pork-fed rats excreted significantly smaller quantities of urine than did the controls. Thus, kidney dysfunction is not the predisposing factor in the production of toxemia, although it occurs immediately when the disease develops.

DIETARY FACTORS IN THE PRODUCTION AND CURE OF TOXEMIC PREGNANCIES INDUCED BY THE FEEDING OF CERTAIN PORK DIETS. P. P. Swanson and P.M. Nelson, Iowa State Coll. (Professional). Probable date of completion 1943.
Reported in Notes on Research No. 5, p. 94, 1940. IN PROGRESS

To date, the effect of adding approximately 25 different supplements to the pork-containing diet that induces toxic symptoms in the parturient rat has been studied. The substitution of raw frozen pork for the autoclaved product produces no beneficial effect. Of the other substances tested in 1939-1940 (Research Notes, 5, 95), only the addition of pancreas improves the diet and results in better lactation. This is of interest in relation to our findings with lipocaic (Research Notes, 3, 89). The respective values of the dietary additions of methionine, inositol, and biotin are being tested. These substances were chosen because of their possible relation to the deposition of fat in the liver.

DIET IN RELATION TO HEALTH AND DISEASE

Diseases (Continued)

Toxemias (Continued)

MODIFICATIONS IN BLOOD, URINE AND TISSUES OF RATS AFFECTED WITH PREGNANCY DISORDER INDUCED BY FLEDING DIETS CONTAINING PORK. P. P. Swanson and P. M. Nelson, Iowa State Coll. (Professional). Reported in Notes on Research No. 5, p. 95, 1940. IN PROGRESS

The concentration of non-protein-nitrogen substances and of urea in the blood, the hydration of important body tissues, and the histology of the adrenal gland are being studied. In addition, attempts to produce toxemia in a larger proportion of the rats by chloroform poisoning, by unilateral nephrectomy, and by the forced feeding of water are in progress.

THE RELATION BETWEEN THE FOOD EATEN BY PREGNANT WOMEN AND THE OCCURENCE OF ECLAMPTOGENIC TOXEMIAS OF PREGNANCY. W. E. Armstrong, F. Falls, and R. Labroica, Okla. A. and M. Coll. (Professional). Coop: Dept. of Obstetrics and Gynecology, Univ. of Ill. IN PROGRESS

The object of the study is to obtain data which will aid in the recommendation of a diet for pregnant women. This diet must be economical and practical, and one which will prevent either the appearance of toxemia or minimize its severity. It is hoped that the study will also shed some light on the primary etiologic factor involved in the production of the toxemias of pregnancy. In studying this problem the physical condition of pregnant women, who are allowed to eat freely of their usual foods, is being compared with that of women receiving a supplement to their usual diet. In addition, the effectiveness of various dietary treatments in alleviating the symptoms of toxemia is being investigated.

TEXTILES AND CLOTHING

Clothing

Body measurements

STUDY OF FOOT MEASUREMENTS FOR SIZING SHOES. P. J. Crittenden. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 109, 1941. IN PROGRESS

In order to improve the fit of shoes, the United States Bureau of Home Economics is developing instruments and methods for measuring feet with a view to initiating a study of foot dimensions.

Childrens clothing

SELECTION OF INFANTS' AND CHILDREN'S CLOTHING WITH REFERENCE TO THE CHILD'S PHYSICAL NEEDS. E. B. Parker under direction of L. C. McGill, Tex. State Coll. for Women (Master's Thesis 1941). On file Library Tex. State Coll. for Women. Completed

The adequacy of the clothing worn by a selected group of Texas children was checked in the light of recommended standards. The garments consisted of everyday play clothes of infants and of boys and girls of the ages 2 to 6. Examination of garments was made during the fall, the winter, and the spring seasons. The characteristics observed included cut or style of the garment, self-help features, and construction processes as they contributed to the child's activity, comfort, and growth. The findings brought out inadequacies in the clothing and afforded a concrete basis for improving the teaching of children's clothing.

THE COMPARATIVE ECONOMY OF HOME-MADE AND COMMERCIALY-MADE PLAY GARMENTS FOR THE PRE-SCHOOL CHILD. P. Martin under direction of G. Steininger, Ohio Univ (Master's Thesis 1941). On file Library, Ohio Univ. COMPLETED

An attempt was made to compare the relative economy of home-made and commercially-made play garments for pre-school children. Nine children each wore a home-made and a commercially-made garment of a similar type for 36 wearings. A record of all repairs made on the garments during the study was kept. The fabrics in the garments were tested and the garments were scored for general appearance. It was found that home construction of play clothes for pre-school children produces a substantial saving. Home-made garments were apt to be constructed better, require less repair, and have more generous allowances for growth than commercially-made garments.

Construction and finishing

FITTING GARMENTS. E. Sommerfeld. C. L. Scott, Bur. Home Econ., U.S.D.A., adviser (Professional). Probable date of completion May 1942. IN PROGRESS

This study is to develop such helps as will assist the home-maker in the production of satisfactory clothing at home. Better fit/mean/wear and economy. ^{will longer}

TEXTILES AND CLOTHING

Clothing (Continued)

Construction and finishing (Continued)

COAT MAKING AT HOME. M. Smith. C. L. Scott, Bur. Home Econ., U.S.D.A., adviser (Professional). Publ. as Farmers' Bul. 1894 (1941) pp. 27.

COMPLETED

This study was to work out a simple, clear procedure for making a coat at home. With the increase of home production of clothing the results of this study should encourage home-makers to undertake the construction of their most expensive item of apparel.

Costume design

A STUDY OF THE DISTINCTIVE REGIONAL COSTUMES OF MEXICO. D. P. Cole under direction of M. E. Clark, Univ. Chicago (Master's Thesis). On file Library, Univ. of Chicago.

COMPLETED

The costumes show that there are basic similarities of class among the natives. Different localities show combinations of foreign influences upon the original native class. The decorative designs have characteristics in common - primary colors, simplified straight line patterns and stylized natives.

CHARACTERISTIC PERIODS OF SEMINOLE COSTUME. H. Wellington under direction of O. Settles, Iowa State Coll. (Master's Thesis 1942). (Part of larger project, Historic Series).

IN PROGRESS

Authentic types of Seminole costume of value to students of historic costume, historic textiles and costume design will be presented in sequence. The periods of Seminole costume are being identified by dated photographs and available existing costumes collected by museums and individuals. The periods are being described and will be illustrated by photographs from authentic sources.

A STUDY OF AZTEC COSTUME FROM THE TIME OF THE MIGRATIONS IN THE 11TH AND 12TH CENTURIES TO THE SPANISH CONQUEST IN 1519 A.D. M. A. McKee under direction of B. Payne, Univ. of Wash. (Master's Thesis 1940). On file Univ. of Wash. Library.

COMPLETED

This study of Aztec Costume was based largely upon an interpretation of the drawings in their own codices and the records made at the time of the Spanish Conquest. Civil, Military and religious costumes revealed the use of a rich variety of materials, a high standard of skill and a fine sense of design. Among the Aztec documents was a wealth of inspirational ideas awaiting the use of creative artists today.

TEXTILES AND CLOTHING

Clothing (Continued)

Expenditures

TIME AND MONEY EXPENDITURE IN THE UPKEEP OF CLOTHING OF BUSINESS AND PROFESSIONAL WOMEN. M. L. Dorsey under direction of F. Vagner, Ohio Univ. (Master's Thesis 1941). On file Library, Ohio Univ. COMPLETED

The time and money expenditure of a selected group of business and professional women of Athens, Ohio, in the upkeep of their wardrobes was recorded. The study included an analysis for a period of one month for 58 women, 29 in the business field and 29 in the professional field. The mean and median monthly expenditures were \$6.68 and \$5.25 respectively. The range of the expenditure of money was 50 cents to \$33.70. Professional women spent almost twice as much money as business women in the upkeep of clothing. The two groups spent approximately the same amount of time for care of clothing. The mean and median monthly expenditures of time for professional women were 465 minutes and 365 minutes, respectively, while those for business women were 461 and 390 minutes, respectively.

CLOTHING AND GROOMING EXPENDITURES OF FAMILIES IN A VILLAGE COMMUNITY OF TEXAS. A. Cross under direction of L. G. McGill, Texas State Coll. for Women (Master's Thesis 1941). On file Library, Texas State Coll. for Women. COMPLETED

Expenditures for clothing and grooming of members of a selected group of families were studied. Accounts of 37 families comprising 184 individuals were checked and tabulated for a year. The incomes of practically half the families ranged from \$400 to \$1000 a year. Clothing expenditures averaged 11.8 percent of the income; upkeep and grooming, 1.4 percent. Fathers and mothers spent approximately the same for clothing, while girls in every age-group spent more than did boys in corresponding age-groups. Individual clothing costs decreased with increase in size of family. In cases where the only child was an adolescent girl, the tendency was to increase the amount spent for clothing. Buying capacity was extended through home activities such as sewing, repairing, laundering, dry-cleaning and grooming.

Fashion

FASHION DEVELOPMENT IN WOMEN'S SHOES IN THE UNITED STATES SINCE 1914. B. Cabell under direction of H. A. Naumann, Women's Coll., Univ. No. Car. (Master's Thesis Jan. 1943). IN PROGRESS

A survey of the advertising section of the Sunday New York Times from 1914 to the present day will be made to find style highlights and fashion trends in women's shoes as influenced by history, economics, politics, society and manufacturing processes.

Clothing (Continued)
Fashion (Continued)

THE INFLUENCE OF WORLD EVENTS ON WOMEN'S FASHIONS IN THE UNITED STATES FROM 1916 to 1940. N. L. Pepler under direction of M. Ford, State Univ. Iowa (Master's Thesis 1941). On file Iowa State Univ. COMPLETED

Changes in fashion in women's clothing which were traceable to current events were studied. The Sunday New York Times from 1916 to 1940 was the most valuable source of information. The study showed that current events do influence fashions and fabrics and that fashions are sensitive and quick to reflect limiting conditions such as scarcity of raw materials as well as progress in the scientific world.

SOME TECHNICAL DEVELOPMENTS, PRECEDING THE CLOTHING FASTENERS OF TODAY IN THE UNITED STATES. E. Lundquist under direction of J. S. Lee, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

Certain technical and economic developments have determined the use of such materials as plastics and metals in clothing fasteners. An effort will be made to show something of the extent of use and value of these materials in fasteners.

A STUDY OF WOMEN'S LINEN HANDKERCHIEFS TO DETERMINE THE EXTENT OF STYLE AND WEARABILITY FACTORS ON CONSUMER CHOICES. D. E. Grant under direction of C. F. Abry and H. Manning, Univ. Wis. (Master's Thesis 1941). Published in Jour. Home Econ. 34 (1942), pp. 99-100. Reported in Notes on Research No. 6, p.114, 1941. COMPLETED

This study showed that the consumer buys a handkerchief primarily for its style and design and that she prefers handkerchiefs which have some applied decoration. Wearability was of secondary importance and her judgment of this factor was not always accurate. The consumer was of the opinion that plain, unadorned handkerchiefs wear better than those with ornamentation, regardless of the quality of linen or the amount of decoration, within reason. Laboratory performance tests, however, did not substantiate this opinion.

Hosiery

SERVICEABILITY STUDY OF HOSE MADE WITH DIFFERENT TOE REINFORCEMENTS OR WITH DIFFERENT COURSE COUNTS. V. C. Jelinek, M. B. Hays, and M. C. Boyer. M. B. Hays and R. F. Rogers, Bur. Home Econ., U.S.D.A., advisers (Professional). Probable date of completion 1943. Reported in Notes on Research No. 6, p. 122, 1941. IN PROGRESS

Hose made from S x P cotton with three toe reinforcements and 3 course counts are worn by student nurses. Samples are removed from service at regular intervals and tested for bursting strength, elasticity, and fluidity in cuprammonium hydroxide. This study will show the importance of certain hosiery construction variables.

TEXTILES AND CLOTHING

Clothing (Continued)
Hosiery (Continued)

THE PERFORMANDE OF SELECTED KINDS OF WOMEN'S FULL-FASHIONED HOSIERY DURING 1941-42. J. Henkel under direction of C. Abry and H. Manning, Univ. Wis. (Master's Thesis 1942). IN PROGRESS

The characteristics and serviceability of selected types of full-fashioned hosiery available on the open market are being studied. Mercerized cotton, lisle, Bemberg rayon, viscose rayon, nylon, and silk hose were selected within a price range of \$.79 to \$1.50 per pair. The hose are being subjected to wearing tests by six students and are being analyzed and tested according to methods described by the Bureau of Standards. Homemakers, professional women, and students will answer a questionnaire giving their reactions to the performance of the above hose.

CHEMICALLY IMPREGNATED HOSE FOR THE TREATMENT OF "ATHLETE'S FOOT". P.J. Crittenden, M. S. Furry, F. Lesch, and L. Seek, Bur. Home Econ., U.S.D.A. (Professional). Probable date of completion 1943. Reported in Notes on Research No. 6, p. 139, 1941. IN PROGRESS

The value of chemically impregnated hose in the treatment of "Athlete's foot" is being studied. Hose are treated with solutions of different chemicals, dried, and worn by the subjects. Patients are examined by a physician to determine the extent of infection and periodically re-examined to follow the effect of treatment.

RELATIONSHIP OF CLOTHING CONSTRUCTION AND COMPOSITION TO BODILY COMFORT AND HEALTH. P. J. Crittenden and F. L. Lesch. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Probable date of completion 1942. Reported in Notes on Research No. 6, p. 111, 1941. IN PROGRESS

The comparative comfort of silk and cotton hose is being investigated by use of physiological methods. Control data consist of radiometer, thermocouple, and perspirometer readings taken on the bare skin for 100 minutes. This procedure is repeated with cotton on one leg and silk on the other. The subject's psychological "comfort" reaction is obtained. These experiments are conducted under varying conditions of temperature and humidity with subjects at rest and exercise.

Made-over garments

THE UTILIZATION OF PARTIALLY WORN CLOTHING WITHIN THE FAMILY GROUP. M. Atkins under direction of M. T. Tate, Va. Polytech. Inst. (Master's Thesis). IN PROGRESS

This study is to ascertain how homemakers within a selected community utilize partially worn clothing, the effectiveness of the ways by which partially worn clothing is utilized, what factors influence its utilization, and the extent to which homemakers have changed their practices in the light of the present emergency.

TEXTILES AND CLOTHING

Clothing (Continued)
Selection

RELATIVE IMPORTANCE OF BUYING AND CONSTRUCTION OF CLOTHING TO GIRLS IN CENTERVILLE HIGH SCHOOL. L. C. Jurrens under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941) COMPLETED

Investigated clothing habits of Centerville High School girls to determine whether emphasis should be placed upon clothing buying or clothing construction in their classes.

A SURVEY OF THE WARDROBE PROBLEMS OF FIFTY GIRLS OF THE ADVANCED CLOTHING CLASSES OF THE FRANKLIN SCHOOL OF CEDAR RAPIDS, IOWA, 1939-40. E. C. Schump under direction of M. Ford, State Univ. of Iowa. (Master's Thesis 1941). On file State Univ. Iowa. COMPLETED

A study of the wardrobe problems of advanced clothing students to determine problems of planning, selecting, and upkeep, together with services received, serves as the basis for curriculum emphasis in home economics classes. The study was conducted by class discussions, reports, and surveys. Results indicated a need on the part of students for instruction on budgeting the clothing wardrobes and an understanding of the girl's proper share in family expenses; selecting ready-made garments; assembling correct types of clothing for different occasions; selecting garments that require the least care and developing a maximum skill in planning, designing, and constructing garments.

FACTORS WHICH DETERMINE THE CHOICE OF DRESSES BY GIRLS AT OHIO UNIVERSITY. P. Carlier under direction of F. Wagner, Ohio Univ. (Master's Thesis 1941). On file Library, Ohio Univ. COMPLETED

Personal interviews with one hundred girls, and personal observations of sixty student purchasers in Athens dress shops were the basis for the study. The observations were used as a check on the statements made by the girls during the interviews. The factors which all students stated they considered in the purchase of dresses were becomingness, color, use, and fit. The two factors considered by the fewest number of students were need and labels. The seniors seemed to show more intelligent planning and purchasing of dresses than the younger girls.

A STUDY OF COTTON MATERIALS PURCHASED BY JUNIOR AND SENIOR HIGH SCHOOL GIRLS. M. C. Lamb under direction of P. I. Mack, Pa. State Coll. (Master's Thesis 1941) Published in The Chemistry Leaflet, XV:4, pp. 85-88. COMPLETED

When girls in junior and senior high school clothing classes were given instruction and facilities for minor testing, which would enable them to make wiser textile fabric selections without additional funds, they selected fabrics with better color fastness to light and laundering, slightly less shrinkage, less sizing, but with no significant difference in average breaking strength.

TEXTILES AND CLOTHING

Clothing (Continued)
selection (Continued)

CLOTHING PRACTICES OF A GROUP OF HIGH SCHOOL GIRLS. S. C. Krembs, Va. Polytech. Inst. (Master's Thesis 1942). IN PROGRESS

A comparison of the clothing practices of girls studying home economics with a non-home economics group will be made by means of questionnaires. This study hopes to ascertain of what high school girls' wardrobes consist, how and where the wardrobe is purchased, the yearly cost of the wardrobe, if the wardrobe is determined by parental influence than by the girl's own choice and if the clothes of the high school girls are suitable for the girl and for the occasion. On the basis of the findings of the study a clothing budget for the teen age girls will be formulated.

WORK CLOTHES FOR FARM WOMEN. ^{C. L. Scott} R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). (Part of larger project, Work Clothes for Women). Published as Multilithed Circ., June, 1941. Farmers' Bul. in preparation. Reported in Notes on Research, No. 6, p. 19, 1941. COMPLETED

The purpose of the project was to develop through experimental study designs for clothing suited to different kinds of work performed by farm women. Clothing suited to the work permits greater comfort and efficiency. It is also economical.

WORK CLOTHING FOR WOMEN IN INDUSTRY. C. L. Scott and M. Smith. R.O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). (Part of larger project, Work Clothes for Women). IN PROGRESS

The study is to develop through experimental study designs for clothing suited to the various types of work in which women are engaged. Clothing that is durable, practical, protective, and permits free activity, increases efficiency, reduces fatigue, and is economical.

SATISFACTION AS COMPARED WITH WEAR OF WORN GARMENTS. M. N. Jordan under direction of P. B. Mack and H. E. Borton, Pa. State Coll. (Master's Thesis). IN PROGRESS

Two hundred and fifty worn-out garments are being studied in conjunction with expressions of satisfaction or dissatisfaction which wearers gave at the time garments were discarded. Laboratory data on the initial fabrics are compared with actual performance, and both are compared with statements of owners as to whether or not the wear received from garments was satisfactory.

THE RELATION OF PRICE AND QUALITY OF GARMENTS. R. T. Davis under direction of P. B. Mack, Pa. State Coll. (Master's Thesis). IN PROGRESS

The price trends in certain textile fabrics suitable for women's and children's wearing apparel are being traced for the past five years, for the purpose of comparing performance with prices.

TEXTILES AND CLOTHING

Clothing (Continued)
Selection (Continued)

IMPORTANT FACTORS IN CLOTHING SELECTION FOR NEGROES. E. M. Washington under direction of L. E. Smith, State Univ. Iowa (Master's Thesis 1941). On file Iowa State Univ. COMPLETED

A body of material was developed that would be an aid in the teaching of costume design, with particular emphasis upon color, to Negro students. A study was made of racial backgrounds, the economic conditions and the educational development of the group. An analysis of complexion types ranging from very dark to very light was made and suitable color harmonies for these types were developed. The thesis included a set of charts showing complexion types with suitable colors for each.

Serviceability tests and performance during wear - Garments

PERFORMANCE DURING WEAR OF WOMEN'S AND CHILDREN'S SILK, WOOL, RAYON, AND COTTON WEARING APPAREL FABRICS. H. E. Borton and M. Butz. P. B. Mack, Pa. State Coll., adviser (Professional). (Part of larger project. Northeastern Regional Cooperative Textile Project). Reported in Notes on Research No. 6, p. 119, 1941. IN PROGRESS

The object of this study and its methods have been described in detail in the Jour. Home Econ. 31 (1939), pp. 177-184. Also reported by B. M. Kuschke from Rhode Island and by B. Blackmore from N. Y. Cornell.

THE EFFECT OF WEAR ON WOOL AND PART-WOOL FABRICS. E. L. Phelps, Univ. Minn. (Professional). (Part of larger project, Factors Affecting the Selection, Care and Wearing Qualities of Textile Materials). Coop. South Dak. State Coll. Reported in Notes on Research No. 6, p. 121, 1941. IN PROGRESS

The first wear period, 1500 hours, on trousers made of three weights of all-wool serge has been completed. The second and third wear period groups are still in service. Physical and chemical tests of the new materials have been completed. Similar measurements on the three weights of fabrics (1) after storage equivalent to the wear period, both with and without five dry cleanings, and (2) after wear and five cleanings are in progress. Reported also by H. M. Ward, South Dak.

THE EFFECT OF WEAR ON FLANNEL MATERIAL MANUFACTURED FROM DIFFERENT GRADES OF WOOL FIBER. H. M. Ward, South Dak. State Coll. (Professional). (Part of larger project, A Study of Certain Properties of Flannel Material Manufactured from Different Grades of Wool Fiber). Probable date of Completion June, 1942. Reported in Notes on Research No. 6, p. 121, 1941. IN PROGRESS

Skirts made from four blends of new and reprocessed wool have been worn by women at South Dak. State Coll. for a total of 1000 hours, the wear period including regular intervals of inspection and drycleaning. Fabric which has been stored for a time equivalent to the skirt wear period and the skirts are being tested chemically and physically in order that comparisons may be made between the new, the stored, and the worn fabrics.

TEXTILES AND CLOTHING

Clothing (Continued)

Serviceability tests and performance during wear - Garments (Continued)

AN INVESTIGATION COMPARING THE SERVICEABILITY OF SUITINGS MADE FROM NEW WOOL AND BLENDS OF NEW WOOL WITH REWORKED WOOL AND SPUN RAYON. M. B. Hays, R. E. Rogers and J. I. Hardy. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 143, 1941. Coop. with Bur. Animal Indus., U. S. D. A. IN PROGRESS

To investigate the effect of the addition of reworked wool and spun rayon on new wool, suitings containing various percentages of these fibers were manufactured. The physical and chemical properties are being determined, and their relative serviceability is being measured by a service study.

Hose

A SERVICEABILITY STUDY OF FULL FASHIONED COTTON HOSE FOR NURSES. M. B. Hays, E. C. Peterson, and V. Jelinek. R. E. Rogers and M. B. Hays, Bur. Home Econ., U. S. D. A., advisers (Professional). Published in Amer. Dyestuff Rptr. 30 (1941), No. 19, pp. 471-478, 495-496. Reported in Notes on Research No. 6, p. 122, 1941. COMPLETED

A cotton hosiery wear study was conducted to investigate the serviceability of two lots of cotton hosiery made from 90/2 and 120/2 cotton yarns. The hose were placed in service at a hospital where they were worn by nurses and returned to the Bureau for laundering and mending. Samples of these hose were subjected to laboratory tests when new and at regular intervals of wear throughout the life of the hose. This is believed to be the initial service study on hose of known yarn construction. As a result of this study a wear-test procedure for hose was developed.

SERVICEABILITY STUDY OF HOSE MADE FROM FOUR VARIETIES OF COTTON OF KNOWN PRODUCTION HISTORY. M. B. Hays, M. C. Boyer, and V. C. Jelinek. R. E. Rogers and M. B. Hays, Bur. Home Econ., U.S.D.A., advisers (Professional). Probable date of completion 1942. Reported in Notes on Research No. 6, p. 122, 1941. IN PROGRESS

Hose made from Coker-Wild, Pima, S X P, and a backcross of S X P on Pima cotton were manufactured and put into service in a hospital. These hose are worn by nurses and are returned to the Bureau for laundering and mending. Laboratory tests are made on the hose when new and at regular intervals of wear.

COMPARING WEARING QUALITIES OF NYLON AND SILK HOSE. M. J. Gracey under direction of E. N. Chapman and M. D. Hale, Univ. Tenn. (Master's Thesis 1941). On file Univ. Tenn. Library. COMPLETED

The data were secured from questionnaires and check cards kept by the thirty women. In all, 128 pair of silk and nylon hose were worn during the twelve weeks. The average number of hours of wear for the nylon hose was greater than for the silk. The silk hose showed greater color-fastness and were more easily snagged than the nylon hose. No significant difference as to which fiber was more comfortable was shown. Both types showed a tendency to break first in the leg. The cost per hour of wear of nylon hose was slightly less than that of silk.

TEXTILES AND CLOTHING

Clothing (Continued)

Serviceability tests and performance during wear - Hose (Continued)

COMPARISON OF THE WEARING QUALITIES OF SIMILAR BRANDS OF NYLON AND SILK HOSE. G. Smith under direction of H. Fletcher, Kans. State Coll. (Master's Thesis 1942). (Part of larger project, A Comparison of the Service Qualities of Certain Synthetic Fabrics and Mixed Synthetic Fabrics). Reported in Notes on Research No. 6, p. 122, 1941.

IN PROGRESS

Silk and nylon hose selected from four popular brands of hosiery are being worn by four persons, and laboratory tests made on the hose before and after wearing. Tests include bursting strength, color changes, identification of dyes, yarn counts.

Underwear

R.E.

SERVICEABILITY OF SELECTED TYPES OF COTTON AND RAYON KNIT UNDERWEAR. Rogers, M. B. Hays and J. Brown. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Published as U.S.D.A. Technical Bulletin 803, Jan. 1942, 22 pp. Reported in Notes on Research No. 6, p. 142, 1941. Coop. with Bur. Agr. Econ., U.S.D.A.

COMPLETED

To compare the relative serviceability of rayon and cotton underwear, union suits, and vests, some composed of cotton and others of rayon, were manufactured in the same constructions and put into service in a training school. Garments were removed from service at regular intervals and tested for changes in physical and chemical properties. The data were analyzed statistically. The cotton and rayon suits were an average of 30.7 and 17.5 periods, respectively, and the vests 43.5 and 34.8 periods.

Consumer Education

Buying guides

LEGAL PROTECTION GIVEN THE CONSUMER BUYER OF TEXTILES AND CLOTHING. R. Halbert under direction of I. S. Brandt, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library.

COMPLETED

The status of legislation included in a thesis on this subject by Mary Bictzman, M.S., 1935 was studied and brought up to date. Such state and federal legislation proposed or passed since 1935 was added. Activities of the Federal Trade Commission with emphasis on its extension of power under the Wheeler Lea Act was surveyed.

CONSUMER REACTION TO LABELS ON WOOL GARMENTS REQUIRED BY THE WOOL PRODUCTS LABELING ACT. I. McNay, under direction of I. L. Brandt, Iowa State Coll. (Master's Thesis).

IN PROGRESS

Observations and questionnaires will be used to determine the extent to which consumers show interest in these labels, and to what extent wool garments are labeled to conform with the Federal Trade Commission rulings. Shoppers in six Iowa stores will be observed and their interest in and reaction to labels will be noted and recorded. Questionnaires will also be used to secure further information.

TEXTILES AND CLOTHING

Consumer Education (Continued)
Buying guides (Continued)

INFORMATIVE LABELS AS A FACTOR IN THE SELECTION OF CERTAIN ARTICLES OF CLOTHING. S. L. Beil under direction of A. Latzke, Kans. State Coll. (Master's Thesis 1942)). IN PROGRESS

Three types of garments frequently purchased by women will be used in making the study. Each garment type will be represented by 3 garments. Women will be asked to choose from among the 3 garments similar in style, price, size and color. One will bear no information, one an inadequate label and one an informative label. Half the women will choose from the garments so labeled and half from the same garments after labels other than brand names and price tags have been removed. An attempt will be made to determine whether or not factors other than labeling affect choices.

Fiber and Fabrics
Analysis

PHYSICAL PROPERTIES OF COTTON CHAMBRAY AND COVERT FABRICS. G. White. M. B. Hays, Bur. Home Econ., U.S.D.A., adviser (Professional). Published in Jour. Home Econ. 33 (1942), pp. 42-50. COMPLETED

Sixteen representative qualities of work shirt fabrics, 9 chambray, and 7 coverts were purchased and tested for thread count, breaking strength, weight, thickness, amount of finishing material, shrinkage and color fastness to both light and washing. Minimum specifications were proposed for chambray and covert.

PHYSICAL PROPERTIES OF COTTON CORDUROY FOR BOYS' CLOTHING. G. White. M.B. Hays, Bur. Home Econ., U.S.D.A. adviser (Professional). Published in Amer. Dyestuff Report 30 (12), pp. 295-298, 315-316, June 9, 1941. Reported in Notes on Research No. 6, p. 127, 1941. COMPLETED

Cotton corduroy suitable for boys' clothing was analyzed to investigate the properties of importance for such fabrics and to set up specifications as buying guides. Standard methods of testing were used whenever possible. Duplicate samples were taken throughout so that the data could be treated statistically. Specifications were submitted by the subcommittee A-6 to committee D-13, of American Society for Testing Materials. The statistical analysis of the data give some information regarding the sampling of fabrics.

THE IDENTIFICATION OF NYLON AND OF LANITAL TEXTILE FIBERS. M. A. Miller, under direction of P. B. Mack and E. N. Chapman, Pa. State Coll. (Master's thesis 1940) Published in Jour. Home Econ., 33 (1941), pp. 255-263.

COMPLETED

A plan for the identification of textile fibers in a fabric was given in such manner as to be usable by high school and college classes. The procedure was extended to include nylon and lanital. The qualitative tests reported individually included microscopic examination, dye tests, and several chemical tests with systematic qualitative procedures applicable to unknown textile materials.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)
Analysis (Continued)

AN ANALYTICAL EVALUATION OF QUALITY IN SILK FABRICS. O. Goodrich under direction of L. Stevenson, Univ. Chicago (Master's Thesis 1940). On file Univ. Chicago Libraries. COMPLETED

Nine white silk crepes, retailing on the Chicago market at one dollar per yard were analyzed for tensile strength, weight, thread count, yarn size, yarn twist, surface dressing and metallic weighting. From the data obtained, the fabrics were rated by the investigators. To obtain a measure of consumer ability to match such ratings, the fabrics were "judged" by one hundred women, varying in age and in experience with textiles.

A STUDY OF THE WOOL FIBER USED IN FLANNELS, SERGES, AND GABARDINES. H. M. Ward under direction of E. L. Phelps, Univ. Minn. (Master's Thesis 1941). (Part of larger project, A Study of Fiber Quality and Physical Properties in Relation to Cost of Staple Wool Materials). On file Library, Univ. Minn. Reported in Notes on Research No. 6, p. 136, 1941. COMPLETED

Diameter measurements of fiber in 29 wool flannels, serges and gabardines indicate, after statistical analysis, that (1) wool in warps was coarser than in fillings in about half of the fabrics; (2) little relationship exists between warps and fillings, mean diameter, or mean contour ratio of fiber for the three groups of fabrics; (3) finer fibers were not more uniform in diameter nor more round in cross-section than coarser fibers; (4) greater variability in contour seemed to be associated with greater ovality; (5) variation of fiber diameter was less within either warp or filling than between the two, and less within a single series of fabrics than among the three groups; (6) the characteristics of the fiber in a series of fabrics could be described adequately with measurements on fewer fibers per fabric if a larger number of fabrics were included in the series.

A STUDY OF FIBER QUALITY AND PHYSICAL PROPERTIES IN RELATION TO COST OF STAPLE WOOL MATERIALS. F. Petzel, S. A. McKee, H. M. Ward, L. Aust, and G. Frankenberg under direction of E. L. Phelps, Univ. Minn. (Master's Thesis). Part of larger project, Factors Affecting the Selection, Care, and Wearing Qualities of Textile Materials). Reported in Notes on Research No. 6, 137, 1941. IN PROGRESS

Analyses of diameter measurements made from cross-sections of fibers from both warp and filling of 29 wool fabrics - flannels, serges, and gabardines - have been completed with respect to mean fiber diameter and contour ratio and the variability of these two measures. Further study of mean diameter values will be undertaken to show variations in the proportions of different grades of wool in the blends used for the yarns in these fabrics.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)
Analyses (Continued)

PROTEIN TEXTILE FIBERS. I: HYDROGEN PEROXIDE FOR INCREASING THE SOLUBILITY OF SOME KERATIN FIBERS. N. Hollen under direction of J. S. Lee, Iowa State Coll. (Master's Thesis 1945). (Part of larger project, Protein Textile Fibers).
IN PROGRESS

Preliminary work has shown that hydrogen peroxide has a definite effect upon the solubility of keratin fibers in cuprammonium solution. Wool, human hair, and cow hair are cleaned by extraction with petroleum ether and are bleached in 3, 15, and 30 percent hydrogen peroxide solutions of pH 4, 7, and 10 respectively at temperatures of 25° and 50° C. A portion of each kind of fiber is cleaned by boiling out in 5 percent soap solution and subsequently treated as above. After bleaching, the hair will be rinsed and dried and then treated with cuprammonium solution to coagulate it. Color tests will be made on bleaching solutions for certain amino acids.

PROTEIN TEXTILE FIBERS. II: LOSS OF NITROGEN AND SULFUR DURING HYDROGEN PEROXIDE TREATMENTS OF SOME KERATIN FIBERS. Sister Lothsire Dietrich under direction of J. S. Lee, Iowa State Coll. (Master's Thesis 1942).
IN PROGRESS

Since chemical change occurred in the fibers during treatment with hydrogen peroxide, quantitative micro methods will be used to determine the loss of nitrogen and of sulfur from the fibers so treated.

Cleaning, laundering, and detergents

METHODS OF IMPROVING THE WASHING PROCEDURE IN PENNSYLVANIA STATE-MAINTAINED INSTITUTIONAL LAUNDRIES. J. F. Krawiec. P. B. Mack, Pa. State Coll., adviser (Professional). Coop. with State-maintained institutions of Pennsylvania. Reported in Notes on Research No. 6, p. 130, 1941.
IN PROGRESS

This study is to improve the laundry techniques used in the state-maintained institutions of Pennsylvania, and to maintain the procedures in these institutions at a higher order of efficiency through the test-bundle method. The methods of procedure are similar to those used in a similar study conducted cooperatively with the Pennsylvania Laundryowners Association.

METHODS OF IMPROVING THE WASHING PROCEDURE IN PENNSYLVANIA COMMERCIAL LAUNDRIES. J. F. Oesterling and W. Stubblebine. P. B. Mack, Pa. State Coll., Adviser (Professional). Coop. with the Pennsylvania Laundryowners Association. Reported in Notes on Research No. 6, p. 130, 1941.
IN PROGRESS

This study is to find the most efficient methods of carrying on the power laundry procedure as measured in terms of soil removal, whiteness retention, color retention, retention of original shape and texture of the fabric, and prevention of breaking strength loss.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Cleaning, laundering, and detergents (Continued)

SOME PHYSICAL CHARACTERISTICS OF DETERGENTS AND ENZYMES OPERATIVE IN AQUEOUS MEDIA. L. L. Arent. P. B. Mack, Pa. State Coll., adviser (Doctor's Thesis).
IN PROGRESS

The interfacial tension between an oiled water interface, instantaneous dispersion, deflocculation, and cataphoretic mobility of soil and textile particles is being studied for a number of detergents and enzymes, in order to ascertain the relationship between these physical properties and the performance of the reagents in soil removal.

THE ELECTROPHORETIC MOBILITY OF CARBON, COTTON, AND WOOL PARTICLES IN AQUEOUS AND NON-AQUEOUS DETERGENT SOLUTIONS. W. Stubblebine. P. B. Mack, Pa. State Coll., adviser (Doctor's Thesis 1942).
COMPLETED

The electrophoretic mobilities of carbon and cotton particles in aqueous detergent solutions and the electrical charges existing on the particles were related to the results of practical soil removal tests in the same detergent systems. The magnitude and sign of the particle charges were equal at the point of maximum detergency. A similar result was obtained when the electrophoretic mobility of carbon and wool was studied in non-aqueous detergent systems. Thus, modification of the electrical charges existing on the surfaces of soil particles and textile fabrics was found to play a contributing role in detergency.

PHYSICAL AND CHEMICAL PROPERTIES IN RELATION TO THE DETERGENCY EFFICIENCIES OF VARIOUS COMPOUNDS. J. F. Oesterling, W. Stubblebine, C. Phillips, and J. Krawiec. P. B. Mack, Pa. State Coll., adviser (Professional). Coop. Pa. Laundryowners Ass'n. & Pa. Ass'n. Dyers and Cleaners, State-Maintained Institutions of Pa. Reported in Notes on Research No. 6, p. 129, 1941.
IN PROGRESS

This study is to find the fundamental principles of detergency. Certain physical properties of potential detergents, such as interfacial tension, deflocculation coefficient, wetting angle, sinking coefficient and others are studied in comparison with soil removal, whiteness retention, and other practical factors involved in laundering and drycleaning.

THE EFFECT OF SODIUM HYPOCHLORITE ON THE PHYSICAL AND CHEMICAL PROPERTIES OF COTTON FIBERS. J. F. Oesterling. P. B. Mack, Pa. State Coll., adviser (Doctor's Thesis 1941).
COMPLETED

By the use of a reproducible and uniform standard soiled fabric and common laundry detergents it was found that the concentrations of detergents were reduced to a common denominator by calculating them on the basis of sodium oxide content; a relationship existed between the results of chemical and physical measurements on detergent solutions and practical soil removal tests; a good detergent required a short wetting time, dispersed carbon soil, had high deflocculation value, lowered the interfacial tension between an oil-water interface markedly, all within practical concentrations of the detergent in a water solution.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Cleaning, laundering, and detergents (Continued)

THE EFFECT OF TWO DETERGENTS UPON COTTON AT TWO TEMPERATURES AND IN TWO TYPES OF WASHING MACHINE. N. M. Krantz. E. D. Roseberry, Purdue Univ., adviser (Professional). Probable date of completion 1942. IN PROGRESS

A home laundry problem is being paralleled with a laboratory problem performed in a portable washer. Two detergents are being employed and conditions are as nearly identical as possible. In the laboratory problem, a higher temperature is being used. Measurements will be made for changes in strength, color retention, whiteness, retention, and soil removal.

THE EFFECT OF CERTAIN COMMON DETERGENTS USED IN THE HOME LAUNDRY UPON SELECTED COTTON FABRICS. F. M. Steckel under direction of A. Latzke and E. Cormany, Kans. State Coll. (Master's Thesis 1941). On file Kans. State Coll. Library. Reported in Notes on Research No. 6, p. 128, 1941. COMPLETED

Two each of yarn-dyed, piece-dyed and surface-dyed fabrics were laundered under home conditions using three detergents. After 5, 10 and 20 launderings tests for strength, elongation, thickness effect of abrasion on strength, elongation and thickness were made. Color change was measured. No one soap was superior in all respects. There seemed to be no relation between price of fabric and effect of detergents. Surface-dyed fabrics showed least decrease in strength, greatest shrinkage, and lowest index of color change. Commercial laundering reported by Smity, 1941, faded 5 of the same materials more than home laundering.

THE EFFECT OF COMMERCIAL LAUNDRY PROCESSES UPON SERVICE QUALITIES OF CERTAIN COTTON FABRICS. E. M. Smith under direction of E. Cormany, Kans. State Coll. (Master's Thesis 1941). On file Kans. State Coll. Library. Reported in Notes on Research No. 6, p. 128, 1941. COMPLETED

Two each of yarn-dyed, piece-dyed, and surface-dyed blue cotton fabrics were tested before and after commercial laundering under three sets of conditions including a cold water process. Different laundering processes had similar effect upon thickness and shrinkage. Elongation was progressively greater after each laundering. Fabrics abraded before laundering seemed to lose more strength than those laundered before abrading. Different laundering processes seemed to have the same effect upon color change at the same interval of laundering. Number of launderings had more effect upon the index of fading than different processes.

THE EFFECT OF LAUNDERING ON SOME PROPERTIES OF CERTAIN SILK CREPES. L. B. Aust under direction of E. L. Phelps, Univ. Minn. (Master's Thesis). (Part of larger project, A Study of Silk and Rayon Crepes Used for Women's Underwear). IN PROGRESS

Six unweighted silk flat crepes have been washed and ironed 25 times using (a) soap with both hard and soft water and (b) a sulfated detergent with soft water. Fabric characteristics and ash content both before and after laundering of all three sets of materials are being determined. Data will be subjected to statistical analysis.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Cleaning, laundering, and detergents (Continued)

COMPARATIVE VALUES OF SOME DETERGENTS AND DETERGENT AIDS IN SCOURING WOOL AND WASHING WOOL FABRICS. D. U. Grundy. E. B. McGowan, Univ. Cal. adviser (Doctor's Thesis 1942). IN PROGRESS

Five sets of the white wool samples will be washed in the launderometer, using standardized solutions at 100° F. for 30 minutes. Standardized rinsings and dryings will follow. Tensile strength, shrinkage, and change in weight of unit squares will be measured. Kjeldahl determinations will be made before and after treatment. Chemical tests for damage, such as Allworden's alkali swelling, methylene blue absorption, are being run, together with microscopic examination, including cross-sectional studies. Findings indicate that certain water softeners and non-soap cleansers have a less destructive action on wool fibers than others in common use.

Effect of microorganisms, and mildew control

A STUDY OF THE OXYGEN ABSORPTION AND CATALASE PRODUCTION DURING THE GROWTH OF CHAETOMIUM GLOBOSUM ON COTTON FIBER AND YARN. D. E. Klemme. R. E. Rogers, Bur. Home Econ., U.S.D.A., adviser (Professional). Submitted to Amer. Jour. Bacteriol. for publication. Reported in Notes on Research No. 6, p.138, 1941. COMPLETED

Samples of cotton fiber and of yarn made from the fiber were inoculated with Chaetomium globosum and incubated in a Warburg apparatus at 80° F. and approximately 100 percent relative humidity for a period of 4 weeks. Both oxygen absorption and the catalase production by the Chaetomium indicated that this fungus utilized raw fiber more readily than it does yarn from the same fiber. Greater care, therefore, should be taken in storing fiber than products manufactured from cotton, unless these products contain certain finishing materials.

EFFECTIVE MILDEW-RESISTANT TREATMENTS FOR COTTON FABRICS. M. S. Furry and H. M. Robinson. R. E. Rogers, Bur. Home Econ., U.S.D.A. adviser (Professional). Published in Amer. Dyestuff Reprtr. 30 (20), 1941, pp. 504, 520-524. COMPLETED

Thirty-two different finishing treatments were applied to degreased and desized unbleached cotton duck and investigated to determine the effect the treatments have on the breaking strength and on their mildew-preventing power. The mildew resistance of the treatments was measured by the change in breaking strength of the treated fabrics after inoculation and incubation with the test organism, Chaetomium globosum. Twenty-eight treatments allowed little or no loss in fabric strength.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Effect of microorganisms, and mildew control (Continued)

THE ACTION OF VARIOUS MICROORGANISMS OF UNBLEACHED COTTON DUCK. R. E. Rogers, D. Klemme, and H. Humfield. R. O'Brien, Bur. Home Econ., U.S.D.A. adviser (Professional). Coop. Bur. Plant Indus., U.S.D.A. Reported in Notes on Research No. 6, p. 139, 1941. IN PROGRESS

The effects of 10 microorganisms are being determined on unbleached duck at 70°, 80°, 90° and 100° F. and at relative humidities of 70, 80, 90, and 100 percent for intervals of 7, 14, 28, and 56 days. Changes in strength, weight, and thickness of the fabric were measured and the catalase produced by the organisms was determined. Correlation of temperature and relative humidity with the deterioration of cotton fabrics by microorganisms may lead to a control of fabric mildew.

THE GROWTH OF FOUR SAPROPHYTIC MICROORGANISMS ON WOOL FABRIC IN THE PRESENCE OF ADDITIONAL NUTRIENTS. D. Hirschmann and M. Zametkin. R. E. Rogers, Bur. Home Econ., U.S.D.A., adviser (Professional) IN PROGRESS

Wool breaking-strength strips are being treated with Bacillus mesentericus, Bacillus subtilis, Actinomyces albus, and Chaetomium globosum on the following media: Czapek's, Czapek's with sucrose omitted, Czapek's with sodium nitrate omitted, mineral salts, and water agar. The percentage loss in breaking strength furnishes a measure of wool deterioration. The deterioration of the wool also is studied by microscopic examination.

PROCESS OF RENDERING FABRICS RESISTANT TO FUNGAL AND BACTERIAL ATTACK, H. M. Robinson. M. S. Furry, Bur. Home Econ., U.S.D.A., adviser. (Professional). Public Service U; S. Patent No. 2,247,339 applied for Oct. 11, 1940, and granted June 24, 1941. COMPLETED

A patented treatment for making cotton fabrics mildew-resistant depends on forming an insoluble compound directly in the fabric through immersing it first in a solution of cadmium or copper salts and, then, in morpholine. Judged on the basis of the test for mildew resistance, measuring the change in breaking strength of the treated fabric after inoculation and incubation with Chaetomium globosum, the treatment is as effective when copper compounds are used with morpholine as when cadmium ones are used. Under conditions of use such as laundering, storage, and exposure to moths, the cadmium-treated fabrics were more satisfactory than the copper-treated.

MILDew RESISTANT FINISHES THAT WITHSTAND WEATHERING, STORAGE, AND LAUNDERING. M. S. Furry, H. Robinson, and D. E. Klemme. R. E. Rogers, Bur. Home Econ., U.S.D.A., adviser (Professional). IN PROGRESS

Unbleached cotton duck treated with special finishes that were found in a previous study to be resistant to Chaetomium globosum, are being subjected to weathering conditions for 3 and 6 months respectively; similar samples are being stored for 6 months and other samples are being laundered several times. The effectiveness of the finishes after such treatment will be tested against mildew.

Fiber and Fabrics (Continued)

Finishing treatment

FINISHING TREATMENTS APPLIED TO COTTON YARNS AND COTTON HOSIERY. M.S. Furry and L. E. Weidenhammer. R. E. Rogers, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 110, 1941.

IN PROGRESS

Comparisons are made between the elasticity of untreated and treated yarns and the elasticity of the corresponding hose. Investigations are also made of the effectiveness on hose of applying finishing treatments to the yarns before they are knitted as compared to applying finishing treatments to the knitted hose. Finishing treatments such as urea-formaldehyde and acrylic ester resins and quaternary ammonium compounds that react chemically with cotton cellulose are being applied.

THE EFFECT OF TREATMENT WITH DIHYDROXYBENZENES UPON THE DETERIORATION OF COTTON FABRICS WHEN EXPOSED TO LIGHT. N. R. Morris under direction of E. D. Roseberry, Purdue Univ. (Master's Thesis 1941). Reported in Notes on Research No. 5, pp. 117-118, 1940.

COMPLETED

Ten cretonne samples were treated with dihydroxybenzenes and analyzed for breaking strength and color before and after 96 hours Fade-Ometer exposure. All untreated fabrics were considerably weakened after exposure. The hydroquinone and pyrocatechol treatments were slightly effective in decreasing strength loss due to exposure. Resorcinol treated fabrics lost more strength than did the untreated samples. No change in color fastness was detected as a result of any of the treatments.

A COMPARISON OF THE BREAKING STRENGTH OF RESIN TREATED WITH UNTREATED RAYON GABARDINES AS AFFECTED BY LIGHT, ABRASION AND CLEANING. J. Surratt under direction of H. Fletcher, Kans. State Coll. (Master's Thesis 1942). (Part of larger project, The Effect of Finishes on the Service Qualities of the Synthetic Fabrics and Fabrics of the Natural Fibers).

IN PROGRESS

Eight viscose rayon gabardines with a resin finish and 8 without a resin finish in light and dark shades of red, blue, green and brown were tested. Samples of the controls and samples after laundering 5 and 10 times and dry cleaning 5 and 10 times will be exposed in the Atlas Fade-Ometer for 40 and 80 hours and will be tested for breaking strength and elongation. Dry, wet and abraded breaking strength and elongation will be made on the controls and after 5 and 10 launderings and dry cleanings. Data will be handled by the analysis of variance.

THE EFFECT OF RESIN FINISHES ON THE COLOR FASTNESS OF RAYON GABARDINES. W.M. Hay under direction of H. Fletcher, Kans. State Coll. (Master's Thesis 1941). (Part of larger project, The Effect of Finishes on the Service Qualities of the Synthetic Fabrics and Fabrics of the Natural Fibers). On file Library, Kansas State Coll.

COMPLETED

Eight viscose rayon gabardines with a resin finish and 8 without a resin finish in light and dark shades of red, blue, green and brown were tested. Samples of the controls and samples after laundering and dry cleaning 5 and 10 times were exposed in the Atlas Fade-Ometer for 40 and 80 hours. Statistical analyses of indices of color change showed that the resin finished fabrics were more colorfast than the non-resin finished fabrics. The resin finishes were permanent to laundering and dry cleaning.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Finishing treatment (Continued)

THE ABSORPTIVE QUALITIES OF TREATED AND UNTREATED FABRICS. V. M. Crouch under direction of K. Hess, Kans. State Coll. (Master's Thesis 1942). (Part of larger project, A Study of Service Qualities of Treated and Untreated Fabrics). IN PROGRESS

Two fabrics with and without treatment with "Zelan" and two with and without treatment with "Aridex" were obtained from the Sayles Bleacher-ies. One fabric with and one without water repellent finish were purchased on the retail market. Fabrics are to be analyzed for amount and kind of finish. The wet disk method is used to test water repellency. Permanence of finish is being tested by comparing the absorptive qualities before and after laundering and dry cleaning. The strain-resistance of the fabric will be tested.

Historic textiles

A CLASSIFICATION OF REPRESENTATIVE GUATEMALAN TEXTILES AS A GUIDE TO THE SELECTION OF PRIVATE AND MUSEUM COLLECTIONS. L. S. Hotvedt under direction of O. Settles, Iowa State Coll. (Master's Thesis 1941). (Part of larger project, Historic Series). On file College Library, Iowa State Coll. COMPLETED

A map of textile areas was made which included information relative to travel, village or pueblo, costume, department or political division and tribe. Approximately 500 well known pieces were studied, illustrated, and charted according to eight fundamental fabric facts common to all textiles. Textiles from representative villages were discussed in detail.

CHINESE TEXTILE COLLECTIONS IN THE UNITED STATES. M. I. Tye under direction of G. G. Denny, Univ. Wash. (Master's Thesis 1941). On file Univ. Library. COMPLETED

Museums and private collections in this country show specimens of all periods and every known technique of Chinese weaving and embroidery. The report, based on intensive study of the Fuller collection (Seattle Art Museum) includes a catalog with map, showing locations of the major collections. The most valuable specimens indicated by the curators are illustrated in photographs. The data will be of value to museums and libraries.

A COMPARATIVE STUDY OF THE TRADITIONAL TEXTILES OF NORWAY, SWEDEN, DENMARK, FINLAND AND ICELAND. M. E. Sorenson under direction of G. G. Denny, Univ. Wash. (Master's Thesis 1941). On file Univ. Wash. Library. COMPLETED

The national characteristics of each country were traced through racial, geographical, economic, social and political influences. A detailed study was made of types and techniques of native textile arts. In comparing similarities and differences in the five countries it was found that the textile arts differ more in degree than in kind. Photographs and photostats are given.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Historic Textiles (Continued)

AN HISTORICAL STUDY OF THE INFLUENCE OF IMPLEMENTS UPON TECHNIQUES IN TEXTILE ART. E. McMurray under direction of A. W. McClelland, Univ. So. Cal. (Degree 1941). On file Univ. So. Cal. Library. COMPLETED

The author conducted research in selected bibliography; observed at first hand several recognized exhibits; studied modern textiles; attended lectures and film showings; and had conferences with recognized authorities. Textile implements increased the variety of textiles, added interest and charm to certain fabrics, and durability and special desired qualities to others. Modern machines made possible a scientific control over textile techniques, thus providing man with fabrics possessing qualities satisfying to his desires.

Serviceability tests - Blankets

A COMPARISON OF THE SERVICEABILITY OF BLANKETS PREPARED FROM BLENDS OF 3/8 BLOOD NEW WOOL WITH VARYING AMOUNTS OF GOOD AND POOR QUALITY REWORKED WOOL. R. E. Rogers, M. B. Hays and J. I. Hardy. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 140, 1941. IN PROGRESS

To determine the effect on blanket fabrics of adding various amounts of good and poor quality reworked wool to new wool, blankets have been manufactured and put into service. A few have been removed for determining changes in physical and chemical properties.

A COMPARISON OF THE SERVICEABILITY OF BLANKETS CONTAINING VARIOUS PERCENTAGES OF REWORKED WOOL AND MOHAIR WITH NEW WOOL. R. E. Rogers, M. B. Hays, and J. I. Hardy. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 141, 1941. Coop. Bur. An. Indus., U.S.D.A. IN PROGRESS

To determine the effect of the addition of reworked wool and mohair to new wool, blankets composed of blends of 3/8 blood virgin wool with reworked wool and mohair were manufactured and put into service. At regular intervals during use, the blankets were tested for breaking and bursting strength; resistance to abrasion; air permeability; heat transmission; sulphur, moisture, and ash content; methylene-blue absorption; and scale breakage.

Fiber and Fabrics (Continued)

Serviceability Tests (Continued) - Curtain fabrics

A COMPARISON OF THE PHYSICAL PROPERTIES AND SERVICEABILITY OF FORTY-TWO PLAIN CURTAIN MARQUISETTES. B. V. Morrison and V. C. Jelinek. M. B. Hays and R. E. Rogers, Bur. Home Econ., U.S.D.A., advisers (Professional). Probable date of completion 1942. Reported in Notes on Research No. 6, p. 141, 1941. IN PROGRESS

To obtain information on curtain marquisettes that can be used in setting up minimum specifications for this type of fabric, 36 plain, all-cotton marquisettes and 6 containing rayon were purchased and tested according to standard methods. From these fabrics, test-curtains were made and put into service. Changes in physical and chemical properties were determined from samples withdrawn from use at regular intervals. The data are now being studied statistically preparatory to writing up the project.

Sheetings

A STUDY OF FOUR CLASSES OF SHEETS DURING SERVICE. M. B. Hays and R. E. Rogers. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Published in Jour. Home Econ. 34, 1942, pp. 112-117. Reported in Notes on Research No. 6, p. 142, 1941. COMPLETED

To study the relative serviceability of various sheet constructions, percale, so-called "fine-count", medium-weight muslin, and heavyweight muslin sheets were purchased and put into service. At intervals during wear sheets were withdrawn and tested. The weight per square yard, number of yarns per inch, breaking strength, shrinkage, fluidity in cuprammonium hydroxide, copper number, and methylene-blue absorption were determined. The heavyweight muslins wore best and the percales and fine counts stood up better than did the two medium weight muslins.

A STUDY OF THE CONSTRUCTION AND DURABILITY OF SHEETS. B. K. Webster under direction of P. B. Mack, Pa. State Coll. (Master's Thesis). IN PROGRESS

Thirteen sheets are being tested for thread count, breaking strength, bursting strength, initial fluidity, miscellaneous construction features, breaking strength, bursting strength, shrinkage after fluidity, shrinkage after 5, 10, 30, and 50 repeated standard launderings.

A COMPARISON OF PRICES AND QUALITIES OF SHEETS AVAILABLE IN THE DIFFERENT TYPES OF STORES IN MISSOURI. N. Grover under direction of J. V. Coles, Univ. Mo. (Master's Thesis 1940) (Part of a larger project, Comparison of Prices and Qualities of Household Textiles). Published as Missouri Agr. Expt. Sta. Bul. 436 (1941), pp. 16. COMPLETED

Sheets and sheetings tested for shrinkage, tensile and bursting strength, thread count, weight per square yard and percentage of sizing included (1) muslin and percale sheets, (2) medium, light and heavy, (3) ready-made vs. home-made sheets, (4) different sizes, (5) purchased at different types of stores. For durability in sheets tensile strength should be the same in warp and filling threads. There was no definite relationship between price and quality. Sheets shrunk more in warp than in filling, and sizing varied from 0.3 to 36.6 percent.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Serviceability tests - Sheetings (Continued)

A STUDY OF THE FIBER, YARN, AND FABRIC PROPERTIES OF COTTON SHEETING.

V. G. Slutz under direction of E. N. Chapman, Univ. Tenn. (Master's Thesis).
IN PROGRESS

Relationship of various physical properties of fibers and yarns to the fabric properties is being studied. Cotton sheeting, both muslin and percales, representative of the types set forth by the American Society for Testing Materials are being studied. Weight per square yard, thread count, fiber diameter, yarn number, fiber length, twists, percent sizing, shrinkage, and tensile strength are being determined.

Miscellaneous fabrics

THE SERVICEABILITY OF GARMENTS AS AFFECTED BY VARIETAL AND REGIONAL DIFFERENCES IN COTTON FIBERS AND BY METHOD OF HARVESTING. M. A. Grimes, Tex. Agr. Expt Sta. (Professional). Reported in Notes on Research No. 6, pp. 120-121, 1941.
IN PROGRESS

To determine the extent to which the serviceability of garments is affected by the variety of the cotton, the region where grown, the season, and the method of harvesting, two each of varieties, regions, seasons and methods of harvesting are being included. The analysis of the physical properties of the fibers and the spinning tests of the first season's crop are completed and those for the second season underway. The manufacture of the yarns, broadcloths and shirts will have to be postponed until the emergency is over and the mills are again operating normally.

A COMPARATIVE STUDY OF SELECTED CHARACTERISTICS OF FOUR TYPES OF COTTON FABRICS. J. Brackett under direction of E. L. Phelps, Univ. Minn. (Master's Thesis 1941). (Part of larger project, A Study of Properties and Serviceability of Cotton Materials Used for Professional Garments). On file Library, Univ. Minn. Reported in Notes on Research No. 6, p. 138, 1941.
COMPLETED

A comparison of mean values of four groups of cotton materials - broadcloths, Indian heads, poplins, and twills - showed that (1) materials within any one group varied considerably, (2) Indian head might prove the most serviceable choice for uniforms or other utility garments, twill being second, and broadcloth being least serviceable of the four, (3) size of yarns and number of yarns per inch influenced other properties studied. Comparisons were made of two methods of abrading fabrics and two methods of determining bursting strength. Shrinking, sizing and mercerization were studied.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Serviceability tests - Miscellaneous fabrics (Continued)

A STUDY OF THE PROPERTIES AND SERVICEABILITY OF COTTON MATERIALS USED FOR PROFESSIONAL GARMENTS. E. L. Phelps, H. Larmore, M. F. West, J. Brackett, and L. Aust, Univ. Minn. (Professional). Reported in Notes on Research No. 6, p. 147, 1941. IN PROGRESS

Four types of cotton fabrics, broadcloths, Indianheads, poplins, and twills will be studied. Fabric and yarn characteristics of the four groups will be compared. One poplin and one broadcloth will be chosen for service tests. Uniforms made of these will be worn by women working in doctors' offices and inspected and laundered after each day's wear. Tests will be made after three different wear periods have been completed. It is planned to study similar characteristics of these two fabrics as purchased and after laundering without being worn.

ANALYTICALLY DETERMINED QUALITIES OF SELECTED BRANDS OF A COTTON FABRIC. M. L. Lashbrook under direction of L. Stevenson, Univ. Chicago (Master's Thesis 1941). On file Univ. Chicago Libraries. COMPLETED

Six specimens each of four different brands of percale at four different prices were analyzed for thread count, weight and tensile strength. Comparisons were made of specimens within brands as well as between different brands and prices. Most of the study was devoted to comparisons of tensile strength, the data being handled statistically with conclusions expressed graphically.

SERVICEABILITY AND CONSTRUCTION OF PERCALE FABRICS. D. E. Miller under direction of E. N. Chapman, Univ. Tenn. (Master's Thesis 1942). IN PROGRESS

Fifty-one percale fabrics are being studied to determine the relationship between color, price and durability. Determinations of fiber content, weave, thread count, weight per square yard, breaking strength, bursting strength, shrinkage, percentage sizing, and color-fastness to sunlight, perspiration, pressing, laundering, and crocking are being made.

A STUDY OF THE FIBER, YARN AND FABRIC PROPERTIES OF WHITE COTTON BROADCLOTH. F. J. Townsend under direction of E. N. Chapman, Univ. Tenn. (Master's Thesis 1942). IN PROGRESS

Comparison is being made of the relationship between the properties of the cotton fibers and the wearing qualities, as determined by laboratory test. Fabrics of different price levels are being tested for breaking strength, bursting strength, twist, yarn number, thread count, weight, percentage, sizing, shrinkage in laundering, fiber diameter, and fiber length.

TEXTILES AND CLOTHING

Fiber and fabrics (Continued)

Serviceability tests - Miscellaneous fabrics (Continued)

ADEQUACY OF FAST COLOR DYES ON CERTAIN COTTON FABRICS. G. Lundvick under direction of G. G. Denny, Univ. Wash. (Master's Thesis 1940). On file Univ. Wash. Library. COMPLETED

Tests of "fast color" dyes on six colors and seven brands of cotton suiting included: 1. Sun-fading in the Fade-Ometer (40 hr.), 2. Test comparable to home laundering plus sun-drying, 3. Two washing tests based on A.A.T. C. C. standards-- (a) comparable to home laundering, (b) comparable to severe commercial laundering. The washing tests were carried out in specially devised apparatus to take the place of the Launderometer. Price bore no relation to color fastness; more suitings were fast to light than to washing, few to both.

THE SERVICEABILITY OF DISH TOWEL FABRICS. M. B. Hays and R. C. Rogers. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Probable date of completion 1942. IN PROGRESS

Dish towels of fabrics made from 45 percent spun rayon, 38 percent cotton, and 17 percent linen were put into service in two homes using different laundry procedures. Towels will be removed at regular intervals and analyzed for weight per square yard, yarn count, breaking strength, thickness, fluidity in cuprammonium hydroxide and copper number.

A STUDY OF THE WEARING QUALITIES OF KITCHEN TOWELS. A. F. Scott under direction of E. N. Chapman, Univ. Tenn. (Master's Thesis 1942). IN PROGRESS

Character of the fabrics found in certain towels sold as cotton and linen are being studied to ascertain their durability and the combined effect of wear, laundering, and aging. The type of towel which Home Management House girls prefer is also being noted. Samples of 8 types of towels were placed in the Home Management Houses for wear tests and laundered by the same commercial laundry. Tests for thread count, fabric thickness, staple length, ply, yarn size, twist per inch, weight per square yard, breaking strength, stretch and shrinkage are being made on new fabrics and after 8, 16, and 24 weeks wear.

A COMPARISON OF PRICES AND QUALITIES OF HOUSEHOLD TEXTILES (TOWELS) AVAILABLE IN DIFFERENT TYPES OF STORES IN MISSOURI. (SELECTION OF TERRY CLOTH TOWELS). P. E. Keeney under direction of F. Harrison, Univ. Missouri. Probable date of completion 1942. IN PROGRESS

Towels will be tested according to American Society of Testing Materials standards for thread count, weight, tensile strength, color fastness. Loss of color in 3 of 100 towels will be tested. Up to the present time there is no correlation between either weight of towel or the number of pile warp used and the amount of water absorbed.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Serviceability tests - Miscellaneous fabrics (Continued)

PHYSICAL CHARACTERISTICS OF SLIP-COVER FABRICS AS A GUIDE TO THEIR SERVICEABILITY. B. V. Morrison. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Published in Jour. Home Econ. 33 (1941), pp. 661-667. Reported in Notes on Research No. 6, p. 127, 1941. COMPLETED

Slip-cover materials were purchased in Washington retail stores. Laboratory analyses for strength, count, weight, shrinkage, air permeability, color permanence, and resistance to abrasion were made. The data were used as a basis on which to formulate suggestions for buying slip-cover fabrics.

A STUDY OF FIBERGLAS IN HOUSEHOLD TEXTILE FABRICS. D. J. Heath under direction of P. B. Mack, Pa. State Coll. (Master's Thesis 1941). Published in The Chemistry Leaflet XV:1, pp. 100-105; Practical Home Economics 20 (1942), No. 3, pp. 93, 115-116. COMPLETED

Seventeen household fabrics made of 100 percent glass recently introduced on the market were tested for strength, color fastness, launderability, and drycleanability. The fabrics were exceptionally strong, satisfactorily color-fast, practically non-shrinkable. A few minor difficulties in laundering and use were described.

A STUDY OF THE CONSTRUCTION AND DURABILITY OF RAYON CREPES. F. Karr under direction of P. B. Mack and H. Borton, Pa. State Coll. (Master's Thesis 1941). Reported in Notes on Research No. 6, p. 148, 1941. COMPLETED

The construction of a series of rayon crepe fabrics suitable for women's wearing apparel was ascertained and other durability fabrics were studied concurrently. The relationship of thread count, twist, ply, and weave to the probable durability of the crepe was discussed in detail.

DURABILITY VERSUS CONSTRUCTION OF SPUN ACETATE RAYONS. F. E. Bolinger under direction of P. B. Mack and H. E. Borton, Pa. State Coll. (Master's Thesis). IN PROGRESS

The construction of spun acetate rayon fabrics and their strength and response to accelerated aging are being studied in order to find whether or not interrelationships occur which will make it possible to predict the durability of spun acetate rayons if the construction is known.

A COMPARATIVE STUDY OF SIX WASHABLE SPUN RAYON FABRICS COMMONLY USED IN WOMEN'S SPORTS CLOTHING. S. S. Larson under direction of C. F. Abry, Univ. Wis. (Master's Thesis 1942). IN PROGRESS

Width, thickness, bow, thread count, length of staple, fabric balance, tensile strength, elongation, yarn size, weight, moisture content, yarn twist and direction, crimp of yarn, bursting strength and color permanence to sun and washing will be determined for a selected number of washable ^{spun} rayons. The results will be compared to standards set up by American Society for Testing Materials with the idea of helping the consumer.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Serviceability Tests - Miscellaneous fabrics (Continued)

A STUDY OF COTTON-RAYON FABRICS TO DETERMINE THE RELATIONSHIP OF PERCENTAGE COMPOSITION TO WEARABILITY. D. E. Grant under direction of C. F. Abry and H. Manning, Univ. Wis. (Master's Thesis 1941). Reported in Notes on Research No. 6, p. 134, 1941. COMPLETED

Price did not prove an indication of wearability. Although the most expensive was rated the highest, the others did not rate accordingly. The correlation between price and percentage composition did not hold true in the middle priced fabrics. The final conclusion indicated that there was no definite correlation found between the percentage composition and wearability of the cotton-rayon fabrics studied. There was a tendency for the fabrics containing a higher percentage of cotton than rayon to hold up better in laboratory wearability tests.

COMPARISON OF THE SERVICE QUALITIES OF CERTAIN FABRICS OF COTTON AND RAYON MIXTURES AND FABRICS OF ALL RAYON OF SIMILAR APPEARANCE. M. G. Sheldon under direction of H. Fletcher, Kans. State Coll. (Master's Thesis 1941). (Part of larger project, A Comparison of the Service Qualities of Certain Synthetic Fabrics and Mixed Synthetic Fabrics). On file Kans. State Coll. Library. Reported in Notes on Research No. 6, p. 146, 1941. COMPLETED

Three all viscose rayon and four viscose rayon and cotton mixed dress fabrics were laundered 5, 10, 15, and 20 times at a commercial laundry. Breaking strength, elongation, abrasion and shrinkage determinations were made on the controls and after the various launderings. The statistical analyses of the data showed that breaking strength and elongation of the rayon was greater than the rayon and cotton mixtures by a very highly significant amount. In shrinkage there were no significant differences between fabrics, launderings or warp vs. filling.

PHYSICAL PROPERTIES OF COTTON, LINEN AND RAYON-MIXED FABRICS COMPARED WITH ALL-LINEN AND ALL-RAYON FABRICS. H. Fletcher, M. G. Sheldon, and C. E. Zink Kans. State Coll. (Professional). (Part of larger project, A Comparison of the Service Qualities of Certain Synthetic Fabrics and Mixed Synthetic Fabrics). Published in Rayon Text. Monthly 22 (1941), pp. 735-737 23 (1942), pp. 29-30. COMPLETED

Two all linen, 2 all viscose rayon, and 5 linen and viscose rayon mixed dress fabrics were laundered 1, 5, and 10 times at a commercial laundry and 3 all viscose rayon and 4 viscose rayon and cotton mixed dress fabrics were laundered 5, 10, 15 and 20 times. Breaking strength, elongation, abrasion, and shrinkage determinations were made. The statistical analyses showed that the breaking strength of the linen was greater than the rayon or the mixtures, and that the breaking strength of the rayon was greater than the rayon and cotton mixtures.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Serviceability tests - Miscellaneous fabrics (Continued)

A COMPARISON OF THE SERVICE QUALITIES OF CERTAIN ALL-SILK AND ALL-RAYON DRESS FABRICS BEFORE AND AFTER DRY CLEANING. E. E. Stout under direction of H. Fletcher, Kans. State Coll. (Master's Thesis 1941). (Part of larger project, A Comparison of the Service Qualities of Certain Synthetic Fabrics and Mixed Synthetic Fabrics). On file Kans. State Coll. Library. Reported in Notes on Research No. 6, p. 143, 1941. COMPLETED

Ten white dress fabrics of taffetas, flat crepes and satin crepes were dry cleaned 1, 5, and 10 times at a commercial establishment. These included pure dye and weighted silk and viscose and cellulose acetate rayon. Breaking strength and elongation, abrasion and shrinkage determinations were made. The statistical analyses of the data showed significant differences. Fabrics of different constructions reacted differently to the same tests. Fabrics of no particular kind of fiber stood out as superior to those of the other kinds of fibers.

COMPARISON OF SOME PHYSICAL PROPERTIES AFFECTING THE SERVICEABILITY OF CERTAIN SILK, RAYON, AND SILK AND RAYON MIXED FABRICS. H. Fletcher, B. Carlson, and H. K. Platt, Kans. State Coll. (Professional). (Part of larger project, A Comparison of the Service Qualities of Certain Synthetic Fabrics and Mixed Synthetic Fabrics). Published in Rayon Textile Monthly 22 (1941), pp. 425-426; 471-474. COMPLETED

Four silk and 4 rayon dress crepes similar in appearance were dry cleaned 5 and 10 times, and 2 silk, 3 rayon, and 3 rayon and silk mixed fabrics suitable for slips were laundered 10 and 20 times. Breaking strength, elongation, abrasion and shrinkage determinations were made on the controls and after 5 and 10 dry cleanings and 10 and 20 launderings. The statistical analyses showed that the silk fabrics had the greatest breaking strength and elongation, the least shrinkage, and were more crease resistant.

A STUDY OF SILK AND RAYON CREPES USED FOR WOMEN'S UNDERWEAR WITH RESPECT TO (1) PHYSICAL CHARACTERISTICS; (2) SLIPPAGE AND OTHER DIFFERENCES DUE TO THE REMOVAL OF FINISHING MATERIALS WITH TWO TYPES OF DETERGENTS; AND (3) THE EFFECTS OF REPEATED WASHINGS WITH TWO TYPES OF DETERGENTS. E. L. Phelps, M. Jewell, G. Frankenberg, A. Bechetti, and L. Aust, Univ. Minn. (Professional). (Part of larger project, Factors Affecting the Selection, Care, and Wearing Qualities of Textile Materials). Reported in Notes on Research No. 6, p. 137, 1941. IN PROGRESS

Certain characteristics of silk flat crepes and rayon French crepes have been measured and compared before and after repeated washing and ironing. Soap has been used with both hard and soft water, and a sulfated detergent with soft water. Differences will be shown between measurements on the new fabrics and those washed once as well as those subjected to repeated washings corresponding to the number encountered in service.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Serviceability tests - Miscellaneous fabrics (Continued)

COMPARISON OF SOME PHYSICAL PROPERTIES AFFECTING THE SERVICEABILITY OF CERTAIN WOOL, RAYON, AND WOOL AND RAYON MIXED FABRICS. H. Fletcher, M.C. Boyer, and Sister Mary Catherine Floersch, Kans. State Coll. (Professional). (Part of larger project, A Comparison of the Service Qualities of Certain Synthetic Fabrics and Mixed Synthetic Fabrics). Published in Amer. Dyestuff Rptr. 30 (1941), pp. 491-495. COMPLETED

Breaking strength, elongation, abrasion, shrinkage, and crease resistance determinations were made on 2 all wool, 8 spun rayon of wool-like texture, and 10 wool and rayon mixed fabrics after 0, 5 and 10 dry cleanings. Statistical analysis of the data showed significant differences. The rayons and mixed fabrics had higher breaking strength than did the wool, and the mixtures were more resistant to abrasion than either wool or rayon. Dry cleaning did not affect the breaking strength.

THE COLOR FASTNESS OF WOOL AND RAYON GABARDINES TO LIGHT, HEAT AND DRY CLEANING. H. M. Scott under direction of H. Fletcher, Kans. State Coll. (Master's Thesis 1942). (Part of larger project, A Comparison of the Service Qualities of Certain Synthetic Fabrics and Mixed Synthetic Fabrics.).

IN PROGRESS

Eight all-wool gabardines and 8 viscose and Teca acetate rayon gabardines in white and light and dark shades of red, blue, green and brown have been purchased for testing color fastness. These fabrics will be dry cleaned 30 times at a commercial establishment. Samples of the controls will be exposed in the Atlas Fade-Ometer for 80 hours, and others will be exposed to heat in constant temperature electric oven. Indices of color change will be obtained. Data will be handled by the analysis of variance.

Specifications

AN ANALYSIS OF CERTAIN COTTON FABRICS. G. Frankenberg and M. B. Hays. B. Mace, Jr., Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 134, 1941. Coop. Farm Security Adm. IN PROGRESS

Outing flannel, unbleached muslin, chambray, denim, and other cotton fabrics sold by the Farm Security Administration Cooperative Associations are being analyzed. These data will be used as a basis for specifications for each type of fabric sold in the Association stores. Specifications were prepared for plain and twill-weave outing flannel, and for unbleached muslin.

A STUDY OF SOME PHYSICAL PROPERTIES OF HEAVYWEIGHT UPHOLSTERY TAPESTRIES, WITH PROPOSED MINIMUM SPECIFICATIONS FOR SUCH MATERIALS. B. V. Morrison. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 127, 1941. IN PROGRESS

To obtain data that will serve as a basis in setting up minimum specifications for the consumer purchase of heavyweight upholstery tapestries, 24 materials of this type were purchased and analyzed.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Testing Methods

AN EVALUATION OF INTERESTS IN COMMERCIAL STANDARD CS59-41 (WOVEN TEXTILE FABRICS, TESTING AND REPORTING). E. F. Kachulis under direction of J.S. Lee and I Brandt, Iowa State Coll. (Master's Thesis 1942) IN PROGRESS

Individual tests of CS59-41 applicable to woven cotton fabrics are compared with other standard test methods for woven textile fabrics, namely, A.A.T.C.C., A.S.T.M., and CCC-T-191a. The chart showing in detail test conditions and methods of reporting, emphasizes the need for standardization of standard test methods. In order to determine the extent to which standard test methods are being referred to on labels of woven cotton yard goods and cotton house dresses, a census was made of labels. Information from these labels is tabulated according to price groups and is interpreted in the light of reference to standard test methods.

A STUDY OF VARIOUS TESTS MADE ON TURKISH TOWELING. K. Ball under direction of E. N. Chapman, Univ. Tenn. (Master's Thesis 1941). On file Univ. Tenn. Library. COMPLETED

The fabrics were tested for breaking strength, bursting strength, thickness, thread count, twists per inch of yarn and weight per square yard. Breaking strength was determined by the grab and raveled-strip methods. Samples were cut end on end using the same threads in several strips and also side by side using different threads in each strip. Either method gave accurate determinations. Preference would depend upon the size of sample and time for preparing samples.

A SPECTROPHOTOMETRIC STUDY OF COLOR-FASTNESS OF REPRESENTATIVE TYPES OF DYE. H. E. Borton. P. B. Mack, Pa. State Coll., adviser (Doctor's Thesis) IN PROGRESS

A few representative types of dyes with respect to chemical structure are being placed on textile fabrics of different fiber content. The fastness of the dyes to such agencies as light, artificial perspiration, laundering, drycleaning, and atmospheric gases, is being studied, using the spectrophotometer as a method of measuring degree of color change.

DEVELOPMENT OF A METHOD FOR THE ANALYSIS OF DYES ON TEXTILE FABRICS. M. Butz under direction of P. B. Mack, and H. E. Borton, Pa. State Coll. (Master's Thesis). IN PROGRESS

The response of 125 dyed fabrics of which the chemical structure of the dyes is known is being studied with respect to a considerable number of qualitative chemical tests. From the results obtained, a systematic method of analysis is being developed in order to make it possible to determine the type of dye present on an unknown textile fabric.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Testing methods (Continued)

CHANGES IN STRENGTH AND IN CERTAIN CHEMICAL PROPERTIES OF TEXTILE FABRICS DURING AN ACCELERATED AGING TREATMENT. E. N. Chapman. P. B. Mack, Pa. State Coll., adviser (Doctor's Thesis 1941). COMPLETED

From a study of pure dye silk, weighted silk, rayons, nylon, and cotton it has been shown that when the factors of light, temperature, and humidity are the sole aging factors an accelerated aging time of one hundred hours under the conditions of test described should predict results obtained for reasonable periods of natural aging with representative fabrics for which a test of this sort would be applicable.

AN INVESTIGATION OF METHODS FOR STERILIZING FABRICS. H. Humfeld, R. E. Rogers and M. G. Wheeler. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 132, 1941.

IN PROGRESS

Methods for sterilizing fabrics which can be used in conjunction with laundering and dry cleaning processes are being sought. Each method not only must be effective bacteriologically but also must not damage the fabric. Sterile samples of cloth were inoculated with test organisms, subjected to various sterilizing processes, and then tested for sterility. The effects of bacteriologically satisfactory processes on the physical and chemical properties of the fabrics were determined.

EVALUATION OF METHODS FOR TESTING CELLULOSE DETERIORATION BY FUNGI. G. A. Greathouse and D. E. Klemme, Bur. Home Econ., U.S.D.A. (Professional). Coop. Bur. Plant Indus.. Probable date of completion 1942. IN PROGRESS

To develop an improved method for measuring the cellulose decomposing activities of microorganisms, for determining fabric deterioration by microorganisms, and for evaluating finishes for fabrics that are treated for mildew resistance a comparison was made of the effect of various fungi on cotton duck, of various media, of different sources and levels of nitrogen and of aerated and nonaerated systems of incubation. The method recommended, using a glass fabric wick and a liquid medium, an aerated system, and ammonium nitrate as the nitrogen source, saves time, materials, and gives greater accuracy than previous procedures.

A METHOD EMPLOYING THE MICROFLORA OF GARDEN SOIL FOR TESTING THE ROT RESISTANCE OF TREATED COTTON FABRICS. M. S. Furry and M. Zametkin. R. E. Rogers, Bur. Home Econ. U.S.D.A., adviser.(Professional). IN PROGRESS

In order to have a quick test for measuring the resistance of cotton fabrics to fungal and bacterial deterioration or rotting, a method is being devised similar to the Chaetomium globosum one but employing the microflora of garden soil as the inoculum. This method is easy to perform, takes less time and is a practical test for out-of-doors fabrics, especially since it uses a mixture of microorganisms instead of one. The microorganisms in the soil used in this study are being isolated and identified. Chemical finishing treatments have been applied to cotton duck and are being tested for rot resistance by this method.

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Testing methods (Continued)

TESTS OF IMPREGNATED FABRICS FOR ANTIBACTERIAL PROPERTIES. D. J. Hirschmann and H. Robinson. R. E. Rogers, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 159, 1941. COMPLETED

A procedure, using a broth medium, was developed for testing the anti-bacterial properties of impregnated fabrics. This procedure is compared with the agar plate method. Twelve impregnated fabrics were tested for their bacteriostatic and bactericidal activities against Escherichia coli. In the paper reporting this work some of the difficulties encountered in the practical application and evaluation of impregnated fabrics from the hygienic standpoint are discussed.

A TECHNIQUE FOR MEASURING EFFICIENCIES OF CERTAIN MOTH-PROOFING APPLICATIONS TO TEXTILE FABRICS. E. Genger under direction of C. R. Phillips, Pa. State Coll. (Master's Thesis 1942). IN PROGRESS

The use of carpet beetle larvae in measuring the moth resistance of textile fabrics is being further standardized, and the method developed is being used in ascertaining the moth proofing properties of reagents on the market sold to drycleaning firms for moth proofing as a part of the cleaning process.

A COMPARISON OF THE DIFFERENT METHODS OF CALCULATING THE FLUIDITY VALUES OF CELLULOSE DISPERSIONS IN CUPRAMMONIUM HYDROXIDE. C. Jelinek. R. E. Rogers, Bur. Home Econ., U.S.D.A. adviser (Professional). Reported in Notes on Research No. 6, p. 149, 1941. IN PROGRESS

The effect of kinetic energy and velocity gradient corrections on the calculations is included in the study.

A COMPARISON OF THE CAUSTIC BOIL, SULFURIC ACID, ALUMINUM CHLORIDE AND FLOTATION METHODS FOR THE DETERMINATION OF WOOL IN MIXED FABRICS. L. Weidenhammer. R. E. Rogers, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 150, 1941. IN PROGRESS

This study is to determine the relative merits of these 4 methods from the standpoint of accuracy, precision, and ease of handling. Six wool-rayon and wool-cotton mixtures varying in wool content from 10 to 80 percent and also samples consisting of known qualities of wool fabric added to known quantities of rayon or cotton have been analyzed by the 4 different methods by the same operator.

THE SULFURIC ACID AND ALUMINUM CHLORIDE CARBONIZATION METHODS FOR THE DETERMINATION OF WOOL IN MIXED FABRICS COMPARED IN AN INTER-LABORATORY STUDY. L. Weidenhammer, Bur. Home Econ., U.S.D.A. (Professional). Coop. with 10 laboratories under general supervision of Committee D-13 on Textile Materials of the American Society for Testing Materials and a subcommittee of the American Association of Textile Chemists and Colorists. Published in American Dyestuff Rptr. 30 (1941) P-348 - P-357. Reported in Notes on Research No. 6, p. 149, 1941. COMPLETED

TEXTILES AND CLOTHING

Fiber and Fabrics (Continued)

Testing methods (Continued)

HOSIERY SEAM POSITION DURING THE FRAZIER TEST. E. Peterson. M. B. Hays, Bur. Home Econ., U.S.D.A., adviser (Professional). Published in Rayon Textile Monthly 22 (1941), No. 8, pp. 59-62. COMPLETED

A comparison was made of test data for 11 styles of hose with the seam below and the seam between the jaws of the Frazier machine. These data when analyzed by variance showed less within-style variation when the seam was between the jaws. In this position the greatest tension is on the more worn parts of the stockings and a more accurate measure of degree of wear could be expected.

Miscellaneous

TEXTILE FIBERS HELP SOLVE A MURDER CASE. J. F. Oesterling and P. B. Mack, Pa. State Coll. (Professional). Published in The Chemistry Leaflet, XV:5, pp. 98-102. COMPLETED

A photo-micrographic method was used in identifying the mixed textile fibers in a sweater worn by a suspected murderer. The scrapings from the finger nails of the victim were studied in comparison with the fibers from the sweater. It was found that twenty-eight of the thirty-four fibers in the sweater were present under the victim's finger nails and that all fibers under the finger nails could be matched with sweater fibers.

CHANGES IN THE PHYSICAL AND CHEMICAL PROPERTIES OF COTTON, LINEN, AND WOOL DURING STORAGE. M. B. Hays and R. E. Rogers. R. O'Brien, Bur. Home Econ., U.S.D.A., adviser (Professional). Reported in Notes on Research No. 6, p. 143, 1941. IN PROGRESS

Cotton, linen, and wool materials have been stored at room temperature and at a higher temperature. Every 6 months for a period of 4 years samples of these materials are removed and analyzed. The results of this investigation should be useful in formulating recommendations for the proper storage conditions for fabrics.

THE EFFECT OF JUICES, SOLVENTS, AND GASES ON KNOWN INDICATOR DYES. E. Osborne under direction of P. B. Mack and C. R. Phillips, Pa. State Coll. (Master's Thesis). IN PROGRESS

Many dyes now used on fabrics, particularly of the rayon type, change color with mild dislocations of the pH of the fabric. Such dyes show changes in certain atmospheric gases or when spillage of foods, medicinals, and beverages takes place or when the fabric comes in contact with perspiration. Dyed fabrics of this type are studied in order to obtain more information on the kinds of dyes which are susceptible to color change under the influence of a variety of reagents.

THE HOUSE

Equipment
stoves

THE EFFECT OF THE METHOD OF HEAT APPLICATION, AND ACCOMPANYING OVEN CONDITIONS, ON THE FLAVOR AND TEXTURE OF BAKED FOODS. M. M. Monroe, P. S. Greene, Maine Agr. Expt. Sta., adviser (Professional). (Part of larger project, The Economic Utilization of Electricity in Food Preparation in Maine Rural Homes). Reported in Notes on Research No. 5, p. 135, 1940. Also in Maine Agr. Expt. Sta. Buls. 397 and 400. IN PROGRESS

Additional information pertaining to muffins baked with or without steam added to the oven revealed that the muffins were not altered in appearance if the steam was not added until after the first quarter of the baking period, or until after the muffins had fully risen. When steam was added at the beginning of baking, rising in a peak and splitting occurred during this first quarter of the baking. Steam was fed at rates to give dewpoints of 150° to 185° F.

A STUDY OF VARIOUS TYPES OF PRESSURE GASOLINE AND PRESSURE KEROSENE STOVES. A. E. Baragar, Univ. Nebr. (Professional). Being publ. as Nebr. Agr. Expt. Sta. Res. Bull. 127. COMPLETED

This was a study to determine the efficiency performance and safety of pressure gasoline and kerosene stoves. The tests performed included efficiency of cooking top for short and long time operations, safety from boil-overs, heat distribution from the burners, operation of thermostatic safety valves, analysis of the products of combustion for CO, general oven performance including preheating rate, cooking rate, heat to maintain, heat losses--divided into wall and metal to metal contact loss and flue loss, surface temperatures and internal heat distribution.

COMPARATIVE FUEL ENERGY STUDY OF STOVES. E. M. Gertz. E. C. McCracken and N. K. Fitch, Teachers Coll., Columbia Univ., advisers (Departmental). Probable date of completion July 1942. IN PROGRESS

This is a comparison of the fuel energy consumption involved in the preparation of a typical moderate cost, weekly menu for a family of four using gas, electric and kerosene ranges. Raw materials, their preparation and the cooking conditions are kept uniform throughout the experiment.

THE HOUSE

Equipment (Continued)
Stoves (Continued)

A PRECISE METHOD FOR DETERMINING THE EFFICIENCY OF ELECTRIC RANGE UNITS. M. . Woodrow, under direction of J. V. Atanasoff (Dept. of Math-Physics) Iowa State Coll. (Master's Thesis 1941). On file in Iowa State Coll. Library. COMPLETED

A vessel which could be calibrated accurately for heat losses through the sides and in determining efficiency of electric range units was designed. The vessel consisted of two brass hemispheres with an inch of insulation between and a changeable bottom surface. Steam was driven out through a vertical brass tube in the top of the vessel into a water cooled condenser. The energy transmitted to the water from the unit was determined from the amount of steam condensed in a certain length of time. Little difference in the efficiency of various types of units was found. It was suggested that a flat ring around the outside of the heating surface and in contact with the utensil, would prevent heat losses and increase efficiency.

PERFORMANCE OF CERTAIN COMBINATION RANGE OVENS. A. Pattison, under direction of L. J. Peet, Iowa State Coll. (Master's Thesis 1941). Submitted for publication Jour. Home Econ. On file Iowa State Coll. Library. COMPLETED

Practical information for homemakers on the performance of combination range ovens was secured by testing one coal-electric and two coal-gas ranges. Tests were made on preheat periods at different thermostat settings, ability of oven to maintain steady temperature, rate of cooling to 200° F., exterior temperatures, distribution of heat in oven with individual and combination of fuels, and browning of white layer cakes. It was found that a combination oven gave satisfactory performance, but that identical directions could not be followed with the two fuels. The two fuels could be used simultaneously, preheating with coal; then turning on gas or electricity to obtain controlled heat. The information obtained would be valuable to the homemaker using or contemplating the purchase of this type of range.

TEST METHODS FOR RANGE OVENS. I. EFFECT ON PERFORMANCE OF VARYING THE FOOD LOAD IN AN OVEN USING BAKING POWDER BISCUITS. M. B. Doughty, under direction of L. J. Peet, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

To determine what constitutes a practical food load for testing ovens baking powder biscuits were baked on one and two baking sheets in loads from one to 48 biscuits. Baking temperature of 425° F. was checked with a portable potentiometer. Variations in performance were determined by differences in browning of top and bottom of biscuits read with a reflectometer. The same degree of brownness was not obtained with the different loads, but the color of all biscuit loads was desirable, and any load might be selected for testing an oven.

THE HOUSE

Equipment (Continued)
Stoves (Continued)

TEST METHODS FOR RANGE OVENS. II. EFFECT OF TEMPERATURE AND LOAD ON THE BROWNING OF A FOOD PRODUCT IN A GAS RANGE OVEN. A. L. Wood, under direction of L. J. Peet, Iowa State College. (Master's Thesis 1941). On file Iowa State College Library. COMPLETED

Baking powder biscuits made of Bisquick and water were baked in loads of 2, 8, 16 and 24 biscuits at approximately constant temperature of 400°, 425° and 450° F., maintained during the baking period by manually controlling the gas flow by means of a needle valve in the main gas line. The size of the load had no significant effect on the browning of that load if the air temperature in the oven was held constant. A change of temperature of 25° F. had a highly significant effect on the browning of the biscuits. Since there was no significant difference in the browning of the tops of the biscuits regardless of the size of the load, any sized load might be used to test an oven. But loads of 24 biscuits would probably be the best as the browning of the tops and bottoms were more nearly uniform.

THE PERFORMANCE OF WOOD RANGES HEATED BY DISTILLATE BURNERS AND AN EVALUATION OF FACTORS WHICH AFFECT THEIR PERFORMANCE. M. M. Monroe. P. S. Greene, Main Agr. Expt. Sta., adviser (Professional). Publ. in Maine Agr. Expt. Sta. Bull. 405, pp. 427-429. Reported in Notes on Research No. 5, p. 134, 1940. COMPLETED

Information about performance and to what extent various factors might affect performance was obtained by measuring oven temperature during preheating and maintenance; by making water heating tests for estimating top-stove performance and by baking certain batters and doughs for oven performance. By opening or closing pipe, ashpit or oven dampers, ovens and top-stove lids could be cooled over a wide range of temperatures varying from a minimum of 25° F. to a maximum of 150° F. A direct-draft stove was very sensitive to small changes in draft. The use of sand in the flue passage under a direct draft oven improved stove performance while there was no appreciable effect for a stove having indirect draft. No effective remedy could be found to prevent diminished flames when a re-filled tank was put in place.

Equipment (Continued)
Stoves (Continued)

TESTING OF 1939-1940 MODELS OF ELECTRIC RANGES SOLD IN THIS TERRITORY. M. M. Monroe. P. S. Greene, Main Agr. Expt. Sta., adviser (Professional) Publ. as Maine Agr. Exten. Serv. Bull. 293, Equipment for Electric Cookery. See also Maine Agr. Expt. Sta. Bull. 405, pp. 427-429. COMPLETED

The tests consisted of measuring the efficiency of heat transfer from top-stove units, the energy to preheat empty ovens and to maintain a given temperature, the evenness of temperature distribution in the empty oven, and the baking of foods to note satisfaction of performance. Temperature measurements showed very little difference in empty oven temperatures at three different levels, bottom, center, and top. But baking of foods showed that the "low" top-unit wattage was excessive in one oven. The bottom of the cake or bread baked at the front of the top rack in another oven was scarcely tinged while that baked on the bottom rack had sufficient bottom browning. Thus, the thermocouples cannot be used to indicate whether top or bottom browning is adequate or excessive. Checking of thermostat calibration by means of empty oven temperature measurements cannot always be relied upon to predict satisfactory performance. One oven, which seemed to be satisfactory when tested empty, invariably failed to provide sufficient heat during baking of foods. The thermostat failed to respond to the oven load.

Food mixers

A STUDY OF SMALL ELECTRICAL FOOD MIXERS. A. E. Baragar, Univ. Nebr. (Professional). Coop. with Home Econ. Dept. of Iowa State and Purdue. Experimental work completed, data not published. IN PROGRESS

Results of laboratory tests have shown that the type of motors and controls used on the light food mixers such as Hamilton Beach and Mix-Master was satisfactory. The method used for rotating the bowl was inadequate. The latest work was to control the rotation of the mixing bowl by an outside source of energy.

A STUDY OF SMALL ELECTRIC MIXERS AND BEATERS FOR HOUSEHOLD USE. G. M. Redfield, Purdue Univ. (Professional). Coop. with Iowa and Nebr. Agr. Expt. Stas. Probable date of completion 1942. Reported in Notes on Research No. 6, p. 161, 1941. IN PROGRESS

Further work has been done on the small electric food mixers under test in an effort to determine the best relationship between beater and bowl with regard to shape and size of bowl, shape and size of beaters, relationship of speed of rotation of bowl and beater for the most satisfactory whipping, beating, mixing, blending and mashing of foods. The work done at Purdue has included the mixing of cake and cookies and the mashing of potatoes.

THE HOUSE

Equipment (Continued)

Food mixers (Continued)

EFFECT OF ADDED ROTATIONS OF THE BOWL OF AN ELECTRIC MIXER ON CERTAIN FOOD PRODUCTS. (Tentative). H. V. Johnson, under direction of V. E. Sater, Iowa State Coll. (Master's Thesis 1942). (Part of a larger project, Operating Efficiency of Small Electric Food Mixers). Coop. with Nebr. and Purdue Univs. IN PROGRESS

The advisability of increasing the rotation of the bowl of a small electric mixer beyond the normal rotation is determined by studying the effect on certain food products. Two mixers are used. One is used as designed; the other is belted to the platform upon which the bowl of the first mixer rests, so that the number of rotations per minute may be controlled. At least two additional speeds are used. Three sets of beater blades are used at each speed. Angel cake and mayonnaise are the mediums tested. Statistical analysis of variance is used to determine results.

Hand irons

A STUDY OF ELECTRIC HAND IRONS. K. Taube, under direction of L. E. Sater, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Testing of Major and Small Appliances). Probable date of completion 1942. Reported in Notes on Research No. 6, p. 159, 1941. IN PROGRESS

The study is being made to determine the electrical energy consumption and relative desirability of irons with different characteristics. Methods and techniques for testing are being developed. Average energy consumption of all irons for ironings completed was .554 kilowatt-hours per hour. Results show that best heat output and temperature maintenance is given by a 1,000 watt iron with thermostatic control. The study will be of value in the development of standardized test methods and in furnishing information for the development of standards and informative labels for hand irons, and for preparation of selection guides.

THE HOUSE

Equipment (Continued)
Toasters

A STUDY OF ELECTRICAL TOAST-MAKING. E. E. Biller, under direction of P. B. Potter, Dept. Agr. Eng., Va. Poly. Inst. (Master's Thesis 1942) (Part of larger project, Household Engineering Research, Va. Agr. Expt. Sta. IN PROGRESS

Some 18 to 20 different toasters have been purchased and are being tested by making toast under all possible variations. Automatic features are given especial observation. Exact time, energy consumption and quality of toast making are studied by extensive repeat tests. Standard fresh bread, sandwiched sliced, is used throughout with some variations in moisture and dryness. Much attention is given to color uniformity with light, medium and dark toast being recognized. General results indicate that low-priced toasters will make about as good toast as any; that they are of lower wattage and require slightly more time; that color results are quite variable and the high-priced toasters with automatic pop-up mechanisms are not consistent in their settings or the toast they will produce. Toast from air-dried bread or from stale bread is good and more economically made. With differences in taste for toast there is some difficulty in deciding on a "standard" toast.

Lamps and lighting

IMPROVEMENT OF THE LIGHTING OF FARM HOMES WITHOUT ELECTRICITY. A. E. Baragar, Univ. Nebr. (Professional), Probable date of completion, 1943. IN PROGRESS

This is a study to determine by means of illumination measurements what arrangements of gasoline or kerosene or both types of lamps can be made to improve farm home lighting. Also what changes in the lamps themselves would improve the illumination. Illumination measurements will be made with a Macbeth Illuminometer and test room will be chosen such that specific wall and ceiling finishes will be involved in the results. The investigation will be kept on as practical a plane as possible and still use technical methods of measurements.

THE HOUSE

Equipment (Continued)

Lamps and lighting (Continued)

ADEQUATE METHODS OF LIGHTING A HOME USING LIQUID FUELS. M. R. Pratt under direction of L. J. Peet, Iowa State Coll. (Master's Thesis 1941) Submitted for publication in Jour. Home Econ.. On file Iowa State Coll. Library. Reported in Notes on Research No. 6, p. 159, 1941.

COMPLETED

This study was undertaken in the interest of the better lighting of homes where electricity and gas are not available. Foot candle determinations and fuel consumption tests were made in the laboratory and the application of the data to the home was studied. Ordinary kerosene lamps, vapor pressure lamps and mantle wick lamps were tested. Adapted I.E.S. shades were used in addition to shades usually provided with the lamps. All lamps should be shaded and a white-lined fireproof shade with large lower diameter similar to the I.E.S. type was recommended. Vapor pressure lamps should be maintained at maximum pressure for high efficiency. Several lamps should be used in a room to obtain a desirable level of illumination.

House planning and arrangement

STANDARDIZED FARMHOUSE PLANS. M. Wilson (Home Econ.), and H. R. Sinnard (Agr. Eng.), Oreg. State Coll. (Professional). Coop. with Dept Agr. Engr., Oreg. State Agr. Expt. Sta. Probable date of completion July 1, 1942. Reported in Notes on Research No. 6, p. 156, 1941.

IN PROGRESS

The purpose of this study is to test and to render more usable the results of the projects, "Standardization of Dimensions of Space Units in the House", and "Cost Analysis of Farmhouse Construction in Oregon". Underway is the development of plans suited to the average farm owner. Home Economics is responsible for the determination of layouts that provide for specified use requirements in the minimum area. Agricultural Engineering selects the layouts that would be the most economical to build, designs exteriors and makes working drawings. Joint consideration is given to decisions requiring compromise between use requirements and design standards.

THE HOUSE

House Planning and Arrangement (Continued)

MINIMUM SPACE REQUIREMENTS OF FARMHOUSE KITCHENS FOR DIFFERENT TYPES OF ARRANGEMENT AND SIZES OF EQUIPMENT. K. Bruntlett and D. G. Counts, under direction of H. Holbrook and L. Sater, Bur. Home Econ., U.S.D.A. (Professional). On file Bur. Home Econ., U.S.D.A. Reported in Notes on Research No. 6, p. 156, 1941.

COMPLETED

In four kitchens having the same amount of working space the L arrangement of equipment took the least time for families of both 4 and 8 persons for the preparation, serving and clearing away of meals, and was the most saving of motions for a family of 8. The parallel wall arrangement involved the most time, but for a family of four persons the fewest total steps, stoops and reaches. For the kitchen work alone the parallel wall type required the fewest motions for 4 persons and the L type the most.

STORAGE SPACE FOR SMALL EQUIPMENT IN THE KITCHEN. R. McClead, under direction of F. Justin, Ohio Univ. (Master's Thesis 1941). (Part of larger project, Supplements Previous Study of Minimum Kitchen Equipment.

COMPLETED

This study was to determine, in a kitchen meeting Kneeland's characteristics for efficiency, the amount, location, and arrangement of storage space which would permit the convenient grouping of small equipment around the working centers where it is used first. The 155 small articles of equipment were placed according to the rules for convenient storage and placement compiled from the literature.

The requirement for equipment storage, as determined by placement, was 8811 square inches. This was 7803 square inches greater than the recommended area of 1008 square inches. Comparison with the recommended shelf-spaces indicated a possible storage inadequacy of 2,226 square inches. Increasing the size of the kitchen to the maximum recommendation 100 square feet, with increased linear wall space for large equipment, if accompanied by a proportionate increase in storage, would supply approximately the revealed inadequacy of storage space.

THE HOUSE

Laundry

A TESTING PROGRAM TO MEASURE FATIGUE SUPPLEMENTED BY MOVING PICTURE STUDIES OF LAUNDRY TECHNIQUES. N. L. Perkins and W. Beyer, Univ. Ill. (Professional). (Part of larger project, A Study to Determine the Major Causes of Fatigue in the Home Laundering Process and to Explore Possible Methods of Studying Problems of Fatigue in Household Work. Probable date of Completion, June 30, 1942. IN PROGRESS

The general procedure consisted of the observation and (1) time and motion study of each practice--sorting, washing, rinsing, starching, hanging out, (2) moving picture study covering the entire laundry sequence, (3) micro-motion studies of the lifting, stooping, stretching, plunging, carrying, shaking incidental to the washing proceedings, and (4) psychological testing program for measuring fatigue conditions before and after washing, all to be preceded by a learning period to get the subject's normal reaction time, of 12 consecutive washings per subject in the home laundry. Psychological tests will be given during the learning period as well as after the new techniques are established for comparison with the original learning period. Interviews for reactions to changed methods, attitudes, and skills will be added at the end of the period.

SURVEY OF PHYSICAL AND SOCIAL CONDITIONS IN RURAL HOMES HAVING BEARING ON HOMEMAKERS' PROBLEMS IN MANAGEMENT WITH SPECIAL REFERENCE TO LAUNDRY PROBLEMS. W. Beyer and I. Templeton, under direction of N. L. Perkins, Univ. Ill. (Professional). (Part of larger project, A Study to Determine the Major Causes of Fatigue in the Home Laundering Process and to Explore Possible Methods of Studying Problems of Fatigue in Household Work. COMPLETED

The general procedure consisted of home visits and personal interviews in 411 typical rural families in seven Illinois Counties obtaining background material for our detailed follow-up research program of testing fatigue factors. Findings consisted of problems associated with housing and engineering, household management, health conditions, and psychological and social factors. The practical value of this study was in getting a true picture of rural conditions under which women work and makes possible offering solutions which can be carried out in terms of what is needed as well as better use of what already exists in the way of plant and equipment.

THE HOUSE

Laundry (Continued)

A COMPARISON OF THE LAUNDRY TECHNIQUES RECOMMENDED IN THE LITERATURE WITH THOSE PRACTICED IN ILLINOIS FARM HOMES. W. Beyer, under direction of N. L. Perkins, Univ. Ill. (Master's Thesis 1942). (Part of larger project, A Study to Determine the Major Causes of Fatigue in the Home Laundering Process and to Explore Possible Methods of Studying Problems of Fatigue in Household Work). On file, Home Econ. Dept., Univ. Ill. COMPLETED

Very detailed notes, floor plans, and "routing maps" of the homemaker in doing her laundry from sorting the clothes to hanging them on the line and cleaning up the wash house, with interruptions, their causes and the reactions to them, were made. It was found that in the absence of running water, heating facilities, drains, and adequate drying space many of the practices recommended in the literature are impractical for rural women. In terms of these findings procedures can now be worked out for rural districts and real help given to the homemakers.

Miscellaneous

THE EFFECT OF DETERGENTS ON THE BACTERICIDAL POWER OF PHENOL. L. E. Hathaway, under direction of C. Poe, Univ. Colo. (Master's Thesis 1941). On file Univ. Colo. Library. Abstr. in Univ. Colo. Studies, Vol. XLI, No. 19. COMPLETED

The newer synthetic detergents have as one of their outstanding characteristics a great surface-tension-depressing property. The object of this research was to determine whether or not the addition of a one percent amount of 19 representative detergent products to solutions of phenol would increase bactericidal action. Two soaps were also included for purposes of comparison. On the average addition of these products doubles the effect of phenol, in most cases.

ABRASIVE EFFECT OF CERTAIN COMMERCIAL CLEANING POWDERS AND PASTES ON PORCELAIN ENAMEL SURFACES. E. Sparks, under direction of L.J. Peet, Iowa State Coll. (Master's Thesis 1941). Publ. in Consumer's Union. Repts. Sept. 1941. The Enamelist (19) No. 3, pp. 8-13, 1941. On file Iowa State Coll. Library. Reported in Notes on Research No. 6, p. 164, 1941. COMPLETED

Tests were made to determine the abrasive action of fourteen popular brands of household cleaning powders and pastes on porcelain enameled cast iron and sheet iron. A special scrubbing machine was constructed for the purpose. All commercial cleaners were found to have some abrasive effect and their use is not recommended. The abrasive effect could not always be judged by their degree of solubility or by their price.

THE HOUSE

Miscellaneous (Continued)

A COMPARATIVE STUDY OF GLASS CURTAIN FABRICS. F. E. Petzel. F. L. Gorrell, adviser (Ohio Agr. Expt. Sta. and the Ohio State Univ. (Professional). Probable date of completion 1942. IN PROGRESS

To secure information for the consumer buyer in relation to problems involved in selection and care of cotton and rayon glass curtains, 36 fabrics, including marquisette, voile, scrim, filet and bobbinette are being tested. Most of the basic physical and chemical tests have been completed. Samples have been exposed to sunlight, to light from a north window and in a Fade-Ometer, and these samples have been tested for breaking strength.

A STUDY OF MODERN FURNITURE FROM THE CONSUMER POINT OF VIEW. B. E. Taylor, under direction of H. A. Naumann, Woman's Coll., Univ. North Carolina (Master's Thesis 1943). IN PROGRESS

The purpose of this study is to consider modern furniture from the point of view of the consumer with particular attention given to cost and design. Information is being received from manufacturers, retailers, and designers of modern furniture through personal interviews and correspondence.

DEMONSTRATION TECHNIQS: A MANUAL ON TECHNIQS TO BE DEVELOPED AND POINTS TO BE CONSIDERED IN LEARNING TO PUT ON AN EFFECTIVE DEMONSTRATION. M. B. Allgood, under direction of L. J. Peet, Iowa State College (Master's Thesis 1942). IN PROGRESS

All available material relating to demonstrations is being collected and used as a basis in developing fundamental principles of demonstration technics. It is printed in manual form to be used by the major students in the household equipment department of Iowa State College. It is also available for use by beginning demonstrators in college and commercial fields. Data are collected by personal interviews, study of available material, and a questionnaire.

THE HOUSING CONDITIONS AND LIVING ROOMS OF 200 FAMILIES IN IBERVILLE PARISH, LOUISIANA. P. Hathaway, under direction of H. Baker, La. State Univ. (Master's Thesis 1941). (Part of larger project, A Study of the Living Rooms in the Homes of 200 Families of Tuscaloosa County, Alabama). COMPLETED

The study was a survey by questionnaires and home visits of 200 homes of Iberville Parish, Louisiana. The survey was made to secure information upon which home economics courses in housing could be based, to determine the relationship between housing conditions and income and the relationship of living rooms to the occupation of fathers. The study revealed that housing conditions were more desirable in homes where incomes were high, that families in which fathers follow professional and commercial occupations enjoy greater advantages in their living rooms, and that more housing surveys are necessary in order that home economics may function in bettering housing conditions.

THE HOUSE

Miscellaneous (Continued)

THE HOUSING CONDITIONS OF 108 FARM FAMILIES IN THE WELLMAN CONSOLIDATED INDEPENDENT SCHOOL DISTRICT OF WELLMAN, TEXAS. V. McFhirter, under direction of L. A. Williams, No. Tex. State Teacher's Coll. (Master's Thesis 1941). On file in No. Texas State Teacher's Coll. Library. COMPLETED

The data for this study were obtained in a questionnaire form through home visits and conferences with the householders. In most respects the data indicated that the Wellman housing situation might be considered on a par with the average farm house situation in Texas, while in other respects it ranked lower. Better sewage disposal was requested by the largest number, with a more adequate water supply coming next. More living space, paper for walls, paint for the exterior, and repairs on roof, windows, doors and screens ranked next in the order given. More bathroom fixtures, landscaping, furniture, and gas for cooking and heating were asked for by the smallest numbers of occupants.

ELECTRICAL SERVICE IN HOMES IN WICHITA, KANSAS. J. Stearns, under direction of P. S. Connor, Syracuse Univ. (Master's Thesis 1942). IN PROGRESS

To ascertain the types of existing electrical service in homes in Wichita, Kansas, and to compare the conditions found with minimum standards for adequacy, convenience, and safety. The investigator inspected the wiring and lighting conditions in 61 older homes and 50 new homes. Over 50% of the homes were overfused. Housewives wish more convenient outlets, and are interested in better diffused lighting. Many out-dated luminaires using bare bulbs were in use.

FAMILY ECONOMICS

Food Buying and the Market

CONSUMER PRACTICES IN BUYING CANNED FOODS LABELED IN VARIOUS WAYS.
A. Hotchkiss, N. Y. State Coll. Home Econ. (Professional). Coop.
with Agr. Market. Serv., U.S.D.A. Probable date of completion,
June 1942. IN PROGRESS

It is proposed to determine consumers' practices in reading labels on canned peaches and canned tomatoes and their discrimination between grade-labeled and non-grade-labeled cans. During about two months in the fall and early winter an investigator spent one week in each of 9 chain supermarkets of Buffalo, New York. She observed the buying of canned peaches and tomatoes by 984 consumers, recorded findings concerning their buying procedures and the store's supply of these products. Analysis is underway.

A STUDY OF FOOD BUYING FOR VERMONT FARM HOMES IN RELATION TO THE RETAIL FOOD STORES IN SHOPPING CENTERS OF VARIOUS SIZES. M. Muse, V. Britton and M. Cowles, Vt. Expt. Sta. (Professional). Probable date of completion 1942-1943. Reported in Notes on Research No. 6, p. 181, 1941. IN PROGRESS

Some factors concerning food retailing are being investigated in selected communities varying in size from hamlets to the largest City in Vermont. Present buying procedures of farm families are being studied in relation to some home and store conditions which affect them. The investigators are then attempting to ascertain the applicability to these home and retail situations of food buying rules from the literature. On the basis of the rules found to be applicable present buying procedures will be evaluated and recommendations made for improvement of food buying.

RULES FOR CONSUMER FOOD BUYING CONTRASTED WITH BUYING PRACTICES. M. M. Cowles, under direction of M. G. Reid, Iowa State Coll. (Master's Thesis 1941). COMPLETED

Frequency of food buying and cost per food order for 103 Iowa farm families was ascertained from their account books, and analyzed in the light of possible contributing factors. Frequency of purchase increased together with total food expenditure, while the average amount spent per trip remained fairly constant. No correlation was found between either frequency of or expenditure per shopping trip and family composition, net farm income, amount of home-produced food, amount of home canning, or the distance from the shopping center.

FAMILY ECONOMICS

Food Buying and the Market (Continued)

SOME FACTORS IN THE RETAIL FOOD STORES OF VERMONT COMMUNITIES OF VARIOUS SIZES. M. Myers, under direction of V. Britton, Vt. Expt. Sta. (Master's Thesis 1941). (Part of larger project, A Study of Food Buying for Vermont Farm Homes in Relation to the Retail Food Stores in Shopping Centers of Various Sizes). On file in Billings Library of Univ. Vt. Reported in Notes on Research No. 6, p. 183, 1941. COMPLETED

Price indexes were determined for 57 selected retail food stores in Vermont communities of different sizes. These indexes were studied in relation to location, services, type of operation, physical condition, and stock of the stores. Prices were found to be closely related to type of operation and services offered, lowest prices being found in chains and in stores offering fewest services.

A SURVEY OF THE PURCHASE OF FROZEN FOODS IN ATHENS, OHIO. C. Simms, under direction of G. Steininger, Ohio Univ. (Master's Thesis 1941). On file Library, Ohio Univ. COMPLETED

Study was made of the extent to which frozen foods were purchased in Athens, Ohio, and the theoretical effect the replacement of fresh foods by frozen foods would have on the nutritive value of the diet. One hundred and fifty women of Athens were interviewed to determine how many purchased frozen foods, which foods were purchased, the frequency of the purchases, and how well the women liked the frozen foods. It was found that 17 frozen vegetables, 16 frozen fruits, and 16 frozen meats were purchased by one or more of the women studied. Only a few of the foods, such as peas, lima beans, corn, and strawberries were purchased often enough to be of much importance in the diet.

A COMPARISON OF THE COST OF CERTAIN FRESH VEGETABLES WITH QUICK FROZEN VEGETABLES. D. Pike, under direction of V. Wyckoff, Ohio Univ. (Master's Thesis 1941). On file, Library, Ohio Univ. COMPLETED

Comparisons were made of the costs of fresh and quick frozen green beans, lima beans, peas, and corn on the cob in selected months. The following factors were taken into consideration: the initial cost of the vegetable; the amount of waste in the fresh form; the length of time of preparation; the amount and cost of fuel consumed in the cooking process; and the amount of nutrients in the two forms and the palatability and attractiveness of the product. It was found that fresh vegetables were more economical in season and that, in most cases, the frozen product was more desirable in flavor and appearance than the fresh product out of season.

FAMILY ECONOMICS

Food Consumption; diets in relation to income

FOOD CONSUMPTION OF SOUTH CAROLINA FARM FAMILIES. A. M. Moser, So. Car. Expt. Sta. (Professional). Submitted for publication, So. Car. Expt. Sta. Reported in Notes on Research No. 6, p. 171, 1941.

COMPLETED

The object was to summarize, compare and interpret the findings of dietary studies made during the period 1932 to 1937 among farm families in three sections of South Carolina. Piedmont dietaries differed from those of the lower Coastal Plains chiefly in having more milk and less lean meat. As a result the average Piedmont dietary at a given money value level was higher in calcium and riboflavin than was the average dietary from the low country. In all sections low values for vitamin C were frequently found. The report makes suggestions for farm family planning of the year's food supply to improve the nutritive content.

FOOD COSTS IN DIFFERENT AREAS OF ARKANSAS. I. C. Wilson, Univ. Ark. (Professional). Coop. with W.P.A.

IN PROGRESS

This is a service project. Food prices are being gathered by W.P.A. field workers in the 75 counties of Arkansas. The findings are to be used in preparing budgets for families on relief, and for applicants for food stamps.

FOOD PRODUCTION AND CONSUMPTION OF SMALL FARM OWNER AND CROPPER FAMILIES IN MISSISSIPPI. D. Dickens, O. Sheets, L. McWhirter and A. Bowie, Miss. State Coll. (Professional). Coop. with Depts. of Agr. Econ. and Soils, Miss. Expt. Sta., Miss. State Board of Health, U. S. Bur. Agr. Econ. and Farm Pop. & Rural Welfare. Probable date of completion, first part of 1943.

IN PROGRESS

Study undertaken to: (1) determine what foods families eat and how these foods are prepared; habits and attitudes of families with reference to diet; the kinds and quantities of foods produced and some of the reasons for this situation; probable effects of these diets upon health of family members; (2) on the basis of these findings to determine feasible methods of improving food production and consumption. Attention is first to be given to how foods are prepared and the effect of this preparation on nutritive value.

DIET IN RELATION TO SOCIO-ECONOMIC CONDITIONS IN A RURAL AREA OF SOUTH CAROLINA. A. M. Moser, So. Car. Expt. Sta. (Professional). Probable date of completion, Sept. 1942. Reported in Notes on Research No. 6, p. 171, 1941.

IN PROGRESS

This study is being conducted to get detailed information on the year's food supply of rural families in Pickens County and on some of the problems connected with home production of foods. The schedule is filled out at one interview. Findings will be related to information obtained by farm management surveys and to other socio-economic data available for the same area.

FAMILY ECONOMICS

Food Consumption; diets in relation to income (Continued)

THE DEVELOPMENT OF AN ADEQUATE DIET AT MINIMUM COST. O. Jeffries, under direction of E. S. Eppright, Tex. State Coll. for Women (Master's Thesis 1941). On file Home Econ. Office, Texas State Coll. for Women, Denton, Texas. COMPLETED

A weekly dietary costing approximately 15 cents per person per day was planned and tried by the students in a Home Management House. In the light of the criticisms made by this group, the menus were revised. They were then given to two families on an extremely low income level to learn of their acceptance of the food, the difficulties encountered by them in following the menus, and their marketing ability. The menus were fairly well accepted, though criticized adversely for the trouble required in preparation. A few of the foods, as Boston brown bread, yellow corn meal products, and baked peanut dishes were disliked. Due to unwise shopping methods, wasteful practices in food preparation, and food dislikes, menus which were expected to cost 10.1 cents per 3000 calories actually cost 14.7 cents.

LOW-PRICED MILK AND CONSUMPTION OF DAIRY PRODUCTS AMONG LOW-INCOME FAMILIES, WASHINGTON, D. C. 1940. H. K. Stiebeling, S. F. Adelson, E. C. Blake, (Bur. Home Econ., U.S.D.A. (Professional). Coop. with Bur. Agr. Econ.; U.S.D.A. as Pub. P. 645 (In press). Reported in Notes on Research No. 6, p. 171, 1941. COMPLETED

To study the effect of a low-priced-milk (relief) program upon consumption of dairy products, families in Washington, D. C. eligible to participate in the program were interviewed before and after 5-cent milk became available. White participants nearly tripled their purchases of fluid milk and increased their consumption of milk in all forms by more than 50 percent. Negro participants almost quadrupled their purchases of fluid milk and doubled consumption of milk in all forms. Even so, education as to the dietary value of milk seems needed to stimulate participants to buy as much 5-cent milk as needed for good nutrition and nonparticipants to take advantage of the program.

PART-TIME FARMING IN RHODE ISLAND. B. M. Kuschke, R. I. Expt Sta. (Professional). Coop. with Dept. of Sociol., R. I. Sta. Submitted for publ. as R. I. Sta. Bul. COMPLETED

To obtain information concerning family dietaries when some food was produced at home, more than 1,000 records of the family weekly food consumption were obtained from homemakers. The dietary records revealed that milk was used in adequate amounts by only about 10 percent of the families, while 40 percent used milk in extremely small quantities or not at all. In the present war emergency these facts point to the need for better nutrition education in these groups.

FAMILY ECONOMICS

Clothing Consumption

AN ANALYSIS OF CLOTHING EXPENDITURES OF FAMILIES OF HOME DEMONSTRATION MEMBERS IN ARKANSAS. J. K. Besser, under direction of I. C. Wilson, Univ. Ark. (Master's Thesis). Probable date of completion 1942. IN PROGRESS

The purpose of this study is to determine the total family expenditures for clothing and the factors affecting same, as well as the expenditures for each family member, materials used, and amount of home sewing done.

CLOTHING FOR WHITE FARM FAMILIES LIVING IN POOR AND RICH AGRICULTURAL COMMUNITIES OF MISSISSIPPI. A. Bowie, D. Dickens, Miss. state Coll. adviser (Professional). Probable date of completion, June 1942. Reported in Notes on Research No. 6, p. 172, 1941. IN PROGRESS

In representative poor and rich agricultural areas 187 socially participating families were visited. Individual social activity records and clothing inventories were made for all members of these families, and family income figures obtained. The preliminary tabulation of the 750 individual records indicate a wider range of social activity, clothing supply and income in the richer areas, although minimums were no lower for poorer than for richer areas.

Cost of Medical Care

SICKNESS AND MEDICAL CARE AMONG THE RURAL POPULATION OF A SAWMILL AREA IN ARKANSAS. I. C. Wilson, Univ. Ark. (Professional). Coop. with Rural Economics and Sociology. Probable date of completion 1942. IN PROGRESS

The purpose of this study is to determine the amount, type and cost of illness among this group of people.

HEALTH SERVICES AND COSTS ON CERTAIN RURAL AREAS OF ARKANSAS. I. C. Wilson and W. H. Metzler, Univ. Ark. (Professional). Coop. with Rural Econ. and Sociol. Publ. as Ark. Agr. Expt. Sta. Buls. 353, 372, 394 and 413. COMPLETED

The purpose of the study was to determine the amount, types and cost of illness in certain rural areas of Arkansas and ways in which farm families sought to overcome their illnesses.

FAMILY ECONOMICS

Levels of Family Living

COMMODITY BUDGETS FOR FARM FAMILIES. Staff of the Family Economics Division, under direction of D. Monroe, Bur. Home Econ. (Professional).
IN PROGRESS

Quantity budgets, listing goods and services characteristic of a maintenance level, are being developed for farm families. The items of consumption and the quantities of each required annually to provide this living level are determined; the items so listed may then be priced and, by weighting, the cost of living may be computed. Such costs may be compared from time to time and from place to place.

FACTORS RELATED TO THE VALUE OF FARM-FAMILY LIVING. D. S. Brady and W. Hurwitz, under direction of D. Monroe, Bur. Home Econ., U.S.D.A. (Professional). (Part of larger project, Consumer Purchases Study). Reported in Notes on Research No. 6, p. 165, 1941. IN PROGRESS

In order to isolate a small number of the variables most highly correlated with the value of farm-family living, data on farm-family living from the consumer-purchases study are being analyzed. It is hoped to find a short list of items of information which will predict the value of living with a reasonable high degree of accuracy. Thus, by obtaining brief sets of facts about families, investigators will be able to classify them in value-of-living groups.

A COMPARISON OF THE SOCIOECONOMIC STATUS OF FARM-REARED FACTORY AND FARM WOMEN IN MISSISSIPPI. SUB-PROJECT I: A COMPARISON OF THE SOCIOECONOMIC STATUS OF FARM-REARED WOMEN EMPLOYED IN TEXTILE MILLS, AND GARMENT PLANTS WITH FARM-REARED WOMEN ENGAGED IN FARMING. D. Dickins, Miss. State Coll. (Professional). Miss. Expt. Sta. Bull. 364, 1941. COMPLETED

Included in this study were two groups of farm-reared women of 17-35 years of age: (1) the industrial group and (2) the farm group. Industrial employment of farm-reared women did not always provide a better living than the farm did. There were varied levels of living both in industrial and farm groups.

FAMILY ECONOMICS

Management of Family Finances

SUMMARY OF COMBINED HOME ACCOUNT AND FARM ACCOUNT RECORDS. H. Sorenson and L. Schruben. L. Bane and H. C. M. Case, Univ. Ill., advisers (Professional). (Part of larger project, A Study of the Use of Income of Farmers. Coop. with Dept. Agr. Econ. Publ. as Mimeo. Bul. AE-1674, Aug. 1941, Ill. Agr. Expt. Sta. COMPLETED

This is the fourth annual report of a larger study in progress on the use of income from Illinois farms. In 1940, 180 families kept complete records of farm and family income, borrowings, expenses, savings, goods furnished by the farm, and modern conveniences owned. This was a group of comparatively high income farmers who have shown special interest in extension programs. Average net family earnings for the group amounted to \$2,868. Ninety-eight were owners or part owners of their land, forty-five were tenants related to their landlords, and thirty-seven were tenants with no relation to their landlords.

AN ANALYSIS OF THE FARM HOME ACCOUNTS OF 358 FARM SECURITY ADMINISTRATION FAMILIES IN ARKANSAS. J. McCool, under direction of I. C. Wilson, Univ. Ark. (Master's Thesis). Probable date of completion 1942. IN PROGRESS

This study is to determine the expenditures for family needs, and how these expenditures are controlled.

AN ANALYSIS OF FARM HOME ACCOUNTS OF 155 HOME DEMONSTRATION MEMBERS IN ARKANSAS. R. McIlnay, under direction of I. C. Wilson, Univ. Ark. (Master's Thesis). Probable date of completion 1942. IN PROGRESS

This study is to determine for these families the value of family living, their expenditures for family needs and how these expenditures are controlled.

FAMILY EXPENDITURES AT DIFFERENT STAGES OF THE FAMILY LIFE CYCLE. Staff of the Family Economics Division, under direction of D. Monroe, Bur. Home Econ., U.S.D.A. (Professional). IN PROGRESS

Living expenditures of city, village, and farm families of the North Central region, classified by stages in the family life cycle, are being analyzed to determine how average outlays change as a family goes from the beginning to the end of the cycle. Tables will show expenditures for two-person families by age of wife, for families with one child by age of child, for families with two children by age of children, and for families with three or four children under 16 years of age.

FAMILY ECONOMICS

Management of Family Finances (Continued)

HOW PROFESSIONAL WOMEN SPEND THEIR MONEY--AN ANALYSIS OF RECORDS FOR 1940. M. Y. Pennell and E. D. Rainboth. D. Monroe, Bur. Home Econ., U.S.D.A., adviser (Professional). Coop. with Ext. Serv. and Farm Security Admin., U.S.D.A. Reported in Notes on Research No. 6, p. 178, 1941. IN PROGRESS

Spending patterns of professional women will be shown by an analysis of 45 personal account books of staff members of the Extension Service, Farm Security Admin., and Bur. Home Econ. in 16 States. Data from this study may be used by professional women as an aid in planning their personal finances. The relationship between income and expenditures for dress and the distribution of clothing funds by levels of expense will be shown, based on 83 clothing records.

STUDY OF FAMILY BUDGETING PRACTICES. Staff of the Family Economics Division, under direction of D. Monroe, Bur. Home Econ., U.S.D.A. (Professional) Uses data from Study of Consumer Purchases 1935-36. Reported in Notes on Research No. 6, p. 177, 1941. IN PROGRESS

This study is to determine how families adjust their budgets in order to provide for greater-than-average outlays for certain major items of expense such as home or farm purchase, installation of running water or electricity, and medical care. An analysis of ways of spending of families who have had such outlays will provide information as to types of adjustments usually made. Popular bulletins on budget making are planned as part of the project.

CONSUMPTION STUDIES IN RURAL FAMILIES, NO. 202. R. Freeman. L. Bane, Univ. Ill., adviser (Professional). Reported in Notes on Research No. 6, p. 167, 1941. IN PROGRESS

Money management, spending and saving patterns of a group of the same families are being studied over a continuous ten-year period. Though many of the factors influencing choices have yet to be analyzed, two points already stand out: Durable goods, as home improvement, furnishings and equipment, are purchased during years of high income to last over periods of low income, except for the families just married and setting up housekeeping. The goal controlling use of income seems to be economic security, which is expressed primarily in purchase of and payment for land. Such findings from families which seem to be obtaining their goals should be of value to all farm families in financial planning.

FAMILY ECONOMICS

Management of Family Finances (Continued)

A STUDY OF THE USE OF INCOME OF FARMERS. H. Sorenson and L. Schruben. L. Bane and H.C.M. Case, Univ. Ill., advisers (Professional). Coop. with Dept. Agr. Econ. Probable date of completion 1942. IN PROGRESS

Farm families cooperating in this project keep coordinated farm and home records showing income and outgo for the farm enterprise and family living as a whole. These records have been kept and summarized for the years 1937, 1938, 1939 and 1940. Records for 1941 are being summarized. The findings for the five-year period will be analyzed and the information rounded out with a questionnaire on the last visit to the families. Results will be compared with other available data.

STUDY OF FACTORS AFFECTING THE EXPENDITURES OF FAMILY LIVING BY KANSAS FARM FAMILIES. M. A. Gunselman. M. A. Justin, Kans. State Coll., adviser (Professional). Coop. with Dept. Agr. Econ. Probable date of completion prelimin. rept. 1942. IN PROGRESS

To determine the relationship between the size of net farm income, the cost of living, and the size of the family, data are being studied from 802 annual records of Kansas farm family expenditures and farm incomes. Records for 504 families kept during a five-year period show an average of 463 acres per farm, \$1704 net farm income and \$1420 for the total value of family living.

FINANCIAL PLANNING FOR FARM FAMILIES. STRENGTHEN HOME DEFENSE THROUGH FAMILY MONEY MANAGEMENT. R. C. Freeman and I. Crouch, Univ. Ill. (Professional). (Part of larger project, Home Accounts for the Family on the Farm and in the Small Town). Publ. as mimeo'd booklet and printed envelop with 4 mimeo'd cards, Univ. Ill. Home Econ. Dept. Reported in Notes on Research No. 6, p. 166, 1941. COMPLETED

Home account records for 1940 from 493 farm families were summarized and analyzed according to number of years married, net cash receipts and money value of living in relation to family type. A comparison of the summarized data from the home account records for the previous nine years was made. Quality of living was measured by modern conveniences, quantities of protective foods used, and other factors as shown by expenditures. The pattern of spending and saving was influenced by the number of years married. The peak load on the family pocketbook was felt in nearly all divisions of spending and saving during the 20th to 25th year of marriage.

FAMILY ECONOMICS

Consumer Credit

THE USE OF CONSUMER CREDIT BY 155 FARM FAMILIES, LAWERENCE COUNTY, MISSOURI. S. Korando, under direction of M. Spicer, Univ. Mo. (Master's Thesis 1942). (Part of larger project, A Study of the Use of Consumer Credit by Missouri Farm Families). IN PROGRESS

The use of credit for farm-family living was investigated in Lawerence Couhty during September. The personal interview method was used.

CREDIT PROBLEMS OF URBAN FAMILIES DIFFERING IN INCOME. H. Wehling, under direction of M. I. Liston, Univ. Nebr. (Master's Thesis).
IN PROGRESS

This study is concerned with ways in which urban families of various income groups differ in their attitudes, practices and problems relative to credit. Data are being secured from a stratified-random sample of 112 families in a mid-western city of approximately 80,000 population which has few war industries. It is hoped that recommendations may be made to various agencies concerning more effective ways of helping families to understand and handle their credit problems.

THE USE OF CONSUMER CREDIT BY 188 FARM FAMILIES, ROLLS COUNTY, MISSOURI. L. Young, under direction of J. Coles and M. Spicer, Univ. Mo. (Master's Thesis). (Part of larger project, A Study of the Use of Consumer Credit by Missouri Farm Families). On file Univ. Mo. Library. COMPLETED

Consumer credit was used by 44 percent of 188 Missouri farm families in a general livestock farming area. About three-fourths of those using credit used only open account or only installment credit. About one-half of the dealer accounts--in number and money value--were installment contracts. Most of these families were unaware of the annual rate of interest and of the legal aspects of the installment contract. Such facts indicate the need for greater information concerning the sources, costs, and obligations of consumer credit.

FAMILY ECONOMICS

Consumer Credit (Continued)

A STUDY OF CREDIT BUREAUS FROM THE CONSUMER'S POINT OF VIEW.
A. Aiken, under direction of H. Canon and L. J. Williamson,
N. Y. State Coll. Home Econ. (Doctor's Thesis). On file N. Y.
State Coll. of Home Econ., Cornell Univ. Reported in Notes on
Research, No. 6, p. 180, 1941. COMPLETED

To learn about the functioning of credit bureaus, 41 managers
of credit bureaus and 295 merchants were interviewed in 37
communities throughout New York State. While the bureaus'
major work was production of financial reports upon merchants'
customers, some managers discussed financial problems directly
with customers. Better reports could be produced if both
customers and merchants recognized the advantages of more com-
plete information at the time credit is granted. More direct
facing of individual credit problems might result if consumers
understood credit-bureau functions and made use of bureau
facilities for financial discussions.

Home Management and Related Factors

STUDY OF FACTORS AFFECTING HOME MANAGEMENT. E. Zremer, under
direction of I. H. Cross, Mich. State Coll. (Professional).
Probable date of completion of prelim. rept., June 1942.
IN PROGRESS

To investigate the influence of factors of management, such as:
size and composition of family, size and type of community educa-
tion of homemaker, occupation of wage earner and economic level
of the family. 381 homemakers in 7 counties were interviewed
in their own homes by one person. Data collected concern prac-
tices in regard to money planning, utilization of goods and
services, expenditure of time and energy, supervision of work,
and establishment of long-time family goals.

HOME LAUNDERING TASKS IN RELATION TO THE WORKER AND THE EQUIPMENT.
E. Knowles. H. Canon and E. M. Cushman, N. Y. State Coll. Home
Econ., Cornell Univ., advisers (Professional). Coop. with Div. of
Psycho-Biology, Dept. of Psychology, Coll. Arts and Sciences.
Probable date of completion 1942. Reported in Notes on Research
No. 6, p. 164, 1941. IN PROGRESS

During the second year of the study, 25 homemakers serving as
subjects are being observed further while working in their homes.
Kymographic records are being made of subjects ironing in the
laboratory to indicate postural balance, pressure on the ironing
board, heart action, respiration, time, and the like. These
records are being supplemented with motion pictures for motion
and postural analysis. Records are indicating that each subject
has an individual and consistent pattern of work. Effects of
working heights upon certain physiological processes seem to be
apparent.

FAMILY ECONOMICS

Home Management and Related Factors (Continued)

TEST OF THE APPLICATION OF WORK UNITS IN HOME MANAGEMENT RESEARCH.
R. Rensberg. H. Canon and E. M. Cushman, N. Y. State Coll. Home Econ., advisers (Professional). Probable date of completion 1942.
IN PROGRESS

Work units that were developed in a study of 502 farm households, and were based on the time spent on certain household tasks, are now being tested: first, by the field records which served as the basis for construction; and second, by observing in homes the different practices and results in performing these common household tasks, in order to determine causes of variation in time spent on the work.

THE PLANNING, BUILDING AND EQUIPPING OF A MOBILE KITCHEN THAT CAN BE USED FOR SERVING LARGE GROUPS AND THAT CAN BE REPRODUCED AT A MODERATE COST. M. J. Florea, under direction of E. M. Cushman and K. Harris, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1942).
IN PROGRESS

A mobile kitchen is being developed for feeding large groups such as school lunches, community gatherings, unusual influxes of workers into a community, and in any emergency where local facilities are inadequate. A one-and-one-half ton truck such as is found on many farms is being used. By experimentation, different types of inexpensive equipment are being developed. Trial meals of different kinds are being served to groups of persons to test the equipment and the service.

DETERMINATION OF PRACTICAL METHODS FOR THE USE OF HOMEMAKERS IN SELECTING SOAPS AND OTHER WATER SOFTENERS. L. J. Williamson, N. Y. State Coll. Home Econ. (Professional). Reported in Notes on Research No. 6, page 134, 1941.
COMPLETED

The method for determining the hardness of a home water supply described in the preceding report were tested by homemakers. Results were well within the limits of accuracy necessary to avoid waste of soap, water softener, and materials that would be damaged through the use of excess water softener. Laboratory tests and conferences with soap makers and chemists who supply the ingredients for commonly sold packaged soap mixtures indicated that certain compounds have replaced in part or entirely builders formerly used, except in soap mixtures in the low price range. These changes in composition produce increased mildness, increased lather, easy removal of grease and decreased difficulty with calcium soap curd.

FAMILY ECONOMICS

Home Management and Related Factors (Continued)

THE MAINTENANCE OF FELT-BASE FLOOR COVERING IN HOME KITCHENS. E. K. Bennett. E. M. Cushman, N. Y. State Coll. Home Econ., Cornell Univ., adviser (Professional). (Part of larger project, The Planning of Home Work Centers and Equipment in Relation to Economy and Satisfaction in the use of Time, Energy, and Money). Reported in Notes on Research No. 6, p. 157, 1941. COMPLETED

One hundred and fifty felt-base rugs, 18 inches by 36 inches, were placed in wear areas in 33 homes. Half of each rug was treated every two weeks with varnish, lacquer, paste spirit-solvent wax, liquid spirit solvent wax, or water emulsion wax, and the dates when the paint coat was worn through on the treated and the untreated halves of the rugs were recorded. Varnish apparently protected the floor covering better than did any of the other finishes, though it cannot be patched successfully when worn through. There was no significant evidence that the waxes or the lacquer offered any real protection from wear; however, the waxes have certain advantages in ease of cleaning.

Miscellaneous

MARKETING THE PRODUCTS OF HOME INDUSTRIES IN ARKANSAS. I. C. Wilson and O. J. Hall, Univ. Ark. (Professional). Coop. with Rural Econ. and Sociol. Probable date of completion, 1942. IN PROGRESS

The operation of farmers' curb markets, home demonstration markets, and souvenir markets is being observed to determine most favorable conditions.

SOCIO-ECONOMIC STUDIES OF SOUTH CAROLINA COMMUNITIES AND COUNTIES BY CLUB WOMEN. M. E. Frayser, So. Car. Expt. Sta. (Professional). IN PROGRESS

Questionnaires and survey forms are prepared as a guide to club women in studying local conditions of health; education, child welfare, recreation, and related subjects

STANDARDS AND LABELS FOR CONSUMER'S GOODS. J. V. Coles. A. F. Morgan, Univ. Cal., adviser (Professional). Probable date of completion 1943. IN PROGRESS

To determine the need for, the present extent of, the methods and problems involved in and the progress achieved in providing standards and labels for describing consumers' goods. Qualitative analyses are being made and some quantitative studies are contemplated.

THE FAMILY

Family Relationships

Family Life and Marriage

THE REPORTED DATING PRACTICES OF ONE HUNDRED AND SIX HIGH SCHOOL SENIORS IN AN URBAN COMMUNITY. H. M. Priested under direction of L. D. Rockwood, N. Y. State Coll. Home Econ., Cornell Univ. (Master's thesis 1941). On file New York State Coll. Home Econ. Cornell Univ. Reported in Notes on Research No. 6, p. 188, 1941.
COMPLETED

The replies to a questionnaire, answered by a group of high school seniors averaging 16.69 years of age, including 55 boys who were members of the Hi-Y Club and 51 girls who were members of the Co-Etiquette Club or of a class in advanced homemaking, showed that 90 percent of the group were dating, that the group, especially the boys, was conservative toward smoking and drinking on dates, and that the cost of dating falls more heavily on the boy than on the girl who attempts to meet the situation by earning part or all of his spending money. A composite picture was drawn of the dating girl and the dating boy. The study shows the need for more opportunities for informal social experiences not too closely supervised by adults and for an understanding adult with whom young people can discuss their perplexities.

THE ATTITUDES OF 364 UNIVERSITY UPPER CLASSMEN TOWARD COURTSHIP AND MARRIAGE. L. D. Rockwood, M. Ford, and O. Powell, N. Y. State Coll. Home Econ., Cornell Univ. (Professional). Probable date of completion 1942. Reported in Notes on Research No. 5, p. 125, 1940.
IN PROGRESS

Questionnaires are being analyzed to discover what attitudes students in the Marriage Course held with regard to premarital and marriage relationships and to compare these attitudes with those of a group of students in the same University who had not elected a Marriage Course; to determine whether the attitudes of University Juniors and Seniors toward courtship and marriage have any relationship to family and community background, father's occupation, sex, courtship status, social affiliations, year in school, college, and source of sex instruction.

A STUDY OF A SELECTED GROUP OF FARM SECURITY FAMILIES. V. A. Kinzie under direction of M. T. Tate, Va. Polytech. Inst., (Master's Thesis 1942).
IN PROGRESS

A picture of the home-management aspects of 25 Farm Security families in Scott Co., Virginia, obtained by the case study method shows in detail their dietary and clothing problems, whether family life is satisfying to the selected group of farm security women, the stability of the family members. Each home was visited at least twice for from several hours to a day at each visit. The data included a clothing inventory for every member of the family, weekly dietary schedules, and a record of the furnishings and equipment and their condition. In addition home work patterns were recorded along with the attitudes of the housewives concerning their homes. The data will be presented in the form of case studies with an analysis.

THE FAMILY

Family Relationships (Continued)

Family life and marriage (Continued)

A STUDY OF CERTAIN ASPECTS OF FAMILY RELATIONSHIPS IN SYRIAN-AMERICAN FAMILIES. S. G. Wakim under direction of R. Staples, Univ. Nebr. (Master's Thesis 1942). IN PROGRESS

The purpose of the study is to determine family relationships and certain home practices that are characteristic of Syrian-American families, to make comparisons with American families, and between families who have retained their Syrian culture in differing degrees. The personal interview/^{technique}is used.

A STUDY OF THE PATTERNS OF RURAL FAMILY LIFE, OF THEIR SIGNIFICANCE IN RELATION TO THE PERSONAL DEVELOPMENT OF CHILDREN AND OF THE BASIC FACTORS ASSOCIATED WITH THEM. L. H. Stott. M. Fedde, Univ. Nebr., adviser (Professional). Probable date of completion 1943. IN PROGRESS

To the students of ten small high schools of Lancaster County, Nebraska, have been administered a set of questionnaires and personality tests. Information was obtained on the social aspects of family life, on economic level, social status and cultural level of the home. Scores on personal adjustment, social adjustment, independence, resourcefulness in groups and personal responsibility were obtained. Statistical analysis of the results is under way.

THE CONSTRUCTION OF AN INSTRUMENT FOR MEASURING SOCIAL, ECONOMIC AND CULTURAL STATUS IN NEBRASKA FARM FAMILIES. H. Ingersoll under direction of L. H. Stott, Univ. Nebr. (Master's Thesis 1942). (Part of larger project, A Study of the Patterns of Rural Family Life, of Their Significance in Relation to the Personal Development of Children and of the Basic Factors Associated with Them).

The purpose of this study is to construct an instrument of the questionnaire type to be given to high school age groups for the purpose of measuring the social, economic and cultural levels of the rural homes which they represent. These scores are being used in connection with a larger study on factors determining differences in patterns of rural family life. The questionnaire was given to 443 high school pupils of Nebraska, the items validated and the revised scale given to 250 additional subjects. Statistical methods are being used to standardize the test, especially the links method of Synonymization. Validity will be established by rating scales secured from eminent persons in each community. Reliability was established by statistical techniques. The subjects are being scored in social, economic and cultural level. The scale is undergoing the second revision and scores have been determined for economic and cultural levels. These scores are already being used in the larger study. The reliability of the scale has been fairly well established.

189
THE FAMILY

Family Relationships (Continued)
Personality and the family

RELATIONS IN THE SEX CYCLE OF WOMAN. M. Altmann, E. Knowles, and H. D. Bull, N. Y. State Coll. Home Econ., Cornell Univ. (Professional). (Part of larger project, An Investigation of the Normal Sex Cycle in Women). Publ. in Psychosomat. Med., Vol III, No. 3, July 1941. COMPLETED

Fifty-five sex cycles for ten normal, healthy, mature college women who volunteered as subjects were studied by means of daily interviews which yielded a detailed report of psychic conditions and results from several physiological measurements and tests. The most universal and conspicuous reaction was an outburst of physical and mental activity before the onset of menstruation, coupled with high tension and irritability and preceded or accompanied by depression. The ovulative phase of the cycle was active too but this type of activity was free from nervous tension and generally bore the character of an elation.

ATTITUDES OF A SELECTED GROUP OF AMERICAN AND CHINESE PARENTS TOWARD THEIR PRE-SCHOOL CHILDREN. R. Lo Tak Mo under direction of K. Roy, Kansas State Coll., (Master's Thesis 1941). On file in Kans. State Coll. Library. Reported in Notes on Research No. 6, p. 188, 1941. COMPLETED

The attitudes of 15 Midwest United States families, 15 Chinese families of Peiping, 10 Chinese families of Hongkong, and 15 Chinese families of San Francisco toward their preschool children were studied through questionnaires. Differences were slight but the Midwest families tended to check physical development as of great, or moderate importance while the Chinese groups had a wider range of opinion. All four groups emphasized the importance of social development, especially the first group. The last group placed greater emphasis on obeying parents, respecting others' rights and on patriotism and leadership for China.

RELATION BETWEEN FARM TENURE STATUS AND FARM CLASS AND PERSONALITY ADJUSTMENTS AND ATTITUDES OF CHILDREN. L. H. Stott. M. Fedde, Univ. Nebr., adviser (Professional). Probable date of completion 1942. (Part of larger project, The Levels of Living and Social Status of Farmers in Selected Counties of Nebraska). Coop. with Dept. Rural Econ., Univ. Nebr., and Bur. Agr. Econ., U.S.D.A. IN PROGRESS

The tenure status and recent tenure history of the families of 273 farm youths of Lancaster County, Nebraska. For most of these "farm class" was also available from work previously done by the Dept. of Rural Economics. Measurement of attitude toward home life and of number of aspects of personality adjustment were also obtained.

THE FAMILY

Family Relationships (Continued)

Teaching family relationships

A STUDY OF COURSES IN FAMILY RELATIONSHIPS IN SECONDARY SCHOOLS.

L. Taylor under direction of F. J. Weersing, Univ. So. Cal.
(Master's Thesis 1941). On file Univ. So. Cal. Library. COMPLETED

An analysis of courses offered in family relationships in 140 selected schools in California was made by a questionnaire prepared on the basis of wide reading, interviews, and analyses of courses of study. Results on 53 questionnaires showed that family relationship courses are directed towards present home life and future home life; sex was taught in other than family courses; the trend was found to be toward a functional program; stress was on boy-girl relationship and standards for choice of mate, and one-half of the schools studied provided courses for boys.

SUGGESTIONS FOR ADAPTING HOMEMAKING OFFERINGS IN HIGH SCHOOL TO MEET MORE ADEQUATELY THE PERSONAL AND SOCIAL ADJUSTMENT OF GIRLS AS PREVENTION OF "CASUAL BREAKDOWN." G. Edwards under direction of E. B. Waring, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1941). On file N. Y. State Coll. Home Econ., Cornell Univ. COMPLETED

Twenty case studies were used as a basis for determining the needs of girls in a high school home economics course, and a specific teaching situation was used as a background for suggested changes in adapting the course to individuals. The suggestions made might be of use in any situation if similar needs were recognized among the pupils.

RESPONSIBILITIES OF HOME, PERSONAL, AND SOCIAL ACTIVITIES REPORTED BY RURAL HIGH SCHOOL GIRLS. A. E. Strouss under direction of E. B. Waring, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1941). On file N. Y. State Coll. Home Econ., Cornell Univ. COMPLETED

Questionnaires from 60 homemaking students in a rural high school were studied for the increase with age in freedom from parental authority in their homes, personal, and social responsibilities. In homes and social responsibilities the greatest increase came between the younger and the medium-age group, and no definite trend was found in personal responsibilities. Although a certain few activities were disliked, the girls expressed a desire for more responsibility than they had. At home they desired especially food preparation, and for the older girls also home improvement; for themselves, making clothes and improving their bedrooms; and socially, going to more shows and dances, and belonging to organizations.

THE FAMILY

Family Relationships (Continued)

Teaching family relationships (Continued)

DEVELOPMENT OF A PLAN FOR A CURRICULUM IN FAMILY LIFE AT THE UNIVERSITY OF UTAH. H. Van Steeter under direction of E. B. Waring and L. D. Rockwood, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1941). On file N. Y. State Coll. Home Econ., Cornell Univ. COMPLETED

The college curriculum should provide for learning situations that offer the adolescent opportunity for experimentation in the personal, social, civic and economic aspects of living. The problems of later adolescence, the trends and issues in modern family life, both national and local; the historical and cultural background of Utah students; the place of Family Life and of Home Economics in the University; the present occupations of Home Economics graduates; a functional directory of social agencies concerned with family welfare were reported and tentative plans for courses were developed.

A STUDY OF THE DEVELOPMENT OF A LEADERSHIP-TRAINING SERIES IN FAMILY RELATIONSHIPS: SEX IN CHARACTER EDUCATION. L. G. Campbell under direction of E. B. Waring, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1941). On file N. Y. State Coll. Home Econ., Cornell Univ. COMPLETED

Records of meetings, preparation notes of the leader, and a questionnaire were analyzed. The differences among the members in meanings and attitudes in sex education at the beginning and end of the course were stated in five general concepts. The trends and shifts in the leader's procedures were described and explained.

SUCCESSFUL COMMUNITY DEVELOPMENT AS REPORTED BY CITIZENS OF SOUTH CAROLINA FOR MANY COUNTIES OF THE STATE. M. E. Frayser, So. Car. Expt. Sta. (Professional). Probable date of completion 1942. IN PROGRESS

Success stories have been collected from South Carolina counties in the field of voluntary community organizations for health and welfare work. Typical stories will be selected for presentation in narrative form as the basis for a publication that it is hoped will stimulate cooperative effort to improve local conditions in many communities of the state.

Child Development

Physical development

RYTHMS IN BEHAVIOR OF NURSERY SCHOOL CHILDREN IN RELATION TO THE SEASON AND THE WEATHER. J. B. McCay. E. B. Waring, K. Reeves, and H. D. Bull, N. Y. State Coll. Home Econ., Cornell Univ., advisers (Professional). (Part of larger project, Outgrowth of Behavior Relating to Nutrition of Sixty-six Nursery School Children). IN PROGRESS

Data from the earlier investigation BEHAVIOR RELATING TO NUTRITION OF SIXTY-SIX NURSERY SCHOOL CHILDREN have been studied in connection with data on season and weather. Relationship will be sought especially with (1) eating, (2) sleeping, (3) bowel movements and bedwetting, and (4) colds.

Child Development (Continued)

Physical development (Continued)

CHANGES OBSERVED BY A HOME VISITOR OVER A SIX MONTH PERIOD, IN THE FOOD HABITS OF FIVE FAMILIES LIVING ON A LIMITED FOOD BUDGET; AND THE GUIDANCE PROCEDURES USED IN THE HOME VISITING. D. Lohmeyer under direction of E. B. Waring, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1942). IN PROGRESS

The study reports the family food habits; nutritional estimates based upon the essentials of an adequate diet; attitudes of the family members toward the desirability and possibility of changing the food habits; details of changes made during the period in the food habits and in the responsibility of the family members for maintaining the better diet; and the guidance procedures of the home visitor in securing the responsible cooperation.

A STUDY OF A GROUP OF NURSERY SCHOOL CHILDREN TO ASCERTAIN THE INCIDENCE OF PIN WORM INFESTATION. H. D. Bull, N. Y. State Coll. Home Econ., Cornell Univ. (Professional) Coop. with D. W. Baker, Dept. Parasitol., N. Y. State Coll. Vet. Med. IN PROGRESS

Recent studies have indicated that this condition is more common than has generally been supposed. It is hoped to continue the study with a second group of children.

Teaching and guidance

PHYSICAL, VERBAL AND EMOTIONAL ASPECTS OF GUIDANCE OF CHILDREN IN A NURSERY SCHOOL. E. Collins under direction of L. Kell, Kansas State Coll. (Master's Thesis 1941). On file Kansas State Coll. Library. Reported in Notes on Research No. 6, p. 189, 1941. COMPLETED

The specific procedures in non-routine guidance used by three experienced nursery school teachers during free play were studied through recording incidents. Two-thirds of the 671 items of guidance were verbal, one-fifth were physical and about one-tenth affective. Sixty-seven percent of the items occurred in the category "Teacher makes statement--- to help child with his doing, thinking, and/or feeling." The use of specific positive directions ranked next highest. These children were receiving guidance that clarified their understanding of their physical world and the materials in it, of the people in that world, of the conformity expected by society, and of their own secure place in relation to the whole.

THE BEHAVIOR OF FIVE PRESCHOOL CHILDREN IN NURSERY SCHOOL AND AT HOME. A. L. Waterson under direction of K. Roy, Kansas State Coll. (Master's Thesis 1941). On file Kansas State Coll. Library. Reported in Notes on Research No. 6, p. 189, 1941. COMPLETED

Tendencies in the behavior of five preschool children in nursery school and at home in relation to parental attitudes and practices were studied by means of diary records at school and at home over a 5-month period. Cooperative behavior, independence, social competence and security in the child were associated with patient consistent guidance and parental attitudes of respect and understanding. Shyness and social insecurity in the child were associated with over-protectiveness and insistence upon adult standards. Aggressive behavior was associated with parental tensions, inconsistent guidance, and lack of affection and understanding.

THE FAMILY

Child Development (Continued)
Teaching and guidance (Continued)

NEGATIVE RESPONSES OF NURSERY SCHOOL CHILDREN TO FOOD IN RELATION TO CERTAIN EMOTIONAL CHARACTERISTICS. M. C. Ericson under direction of T. F. Vance, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. Reported in Notes on Research No. 6, p. 191, 1941. COMPLETED

The relationship between negative and emotional characteristics and eating habits of forty Iowa State College Nursery School children and forty from the nursery school and junior kindergarten of Winnetka, Illinois, was made by recording eating habits over a period of six weeks by the nursery school teachers. Behavior records indicating negative emotional responses were checked by parents. Scores on behavior records were correlated with partial and with complete food refusals. For the Winnetka group a highly significant correlation exists between partial food refusals and behavior scores. Other correlations are non-significant. The Winnetka children show ten times as many food refusals as the Iowa State College children.

THE NEEDS OF RURAL WOMEN FOR GUIDANCE IN CHILD DEVELOPMENT. J. Clifton under direction of E. J. Day, Univ. Tenn. (Master's Thesis 1941). On file Univ. Tennessee. COMPLETED

The study was designed to find, for rural women, the needs for guidance in every day problems of child care and to study the practices used to meet the problems. Two hundred thirty-six rural women of Virginia filled out questionnaires in relation to husbands occupation, their training in child development, their age and the amount of education which they had received. Subjects in lower occupational groups and those with eight years or less of education had the greatest need for guidance while the greatest problem for all mothers was habit training.

AN INVESTIGATION OF PARENTAL ATTITUDES TOWARD RELIGIOUS EDUCATION FOR THE PRESCHOOL CHILD. R. V. Lane under direction of E. J. Day, Univ. Tenn. (Master's Thesis). On file Univ. of Tennessee. COMPLETED

The attitudes of ninety-five parents in Knoxville, Tennessee, toward religious education of the preschool child were studied by a questionnaire compiled from printed material of ministers, atheists and others interested in religious education from the standpoint of child psychology, sociology, etc. In general the parents believed the child should receive religious education in the home and also attend Sunday School but this study did not investigate actual practices.

THE FAMILY

Child Development (Continued)

Teaching and guidance (Continued)

THE BEHAVIOR OF NURSERY SCHOOL CHILDREN AS CORRELATED WITH THE VIEWS OF THEIR PARENTS. H. L. Ewing under direction of I. H. Gross, Mich. State Coll. (Master's Thesis 1941). On file College Library, Mich. State Coll. COMPLETED

Relationships between specific behavior of nursery school children and parental attitudes toward these behavior situations were studied in eleven situations for 23 children in the College Nursery School. Views of their parents were obtained through questionnaires. Rating scales for views and behavior were made by a jury of 13 nursery school experts. Correlations between the mothers' views and the children's behavior were generally positive; between the fathers' views and children's behavior, generally negative. The range of parental views on behavior situations was only half as great as the range of variations in actual behavior.

THE DEVELOPMENT OF TWENTY-FIVE HOME MANAGEMENT BABIES AS COMPARED TO THOSE WHO HAVE ALWAYS LIVED IN THE SAME ENVIRONMENT. F. Urban under direction of T. F. Vance, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

To determine the later growth and development of babies who have had the experience of living in a home management house as compared to that of children who have always lived in their own homes, a case study is being made of twenty-five home management babies. For each child who is of school age a control child of, as nearly as possible the same age and sex, from the same community and the same socio-economic level is chosen. The children are being given the Merrill-Palmer, Stanford-Binet tests and rated as to health, number in the family, type of home, social behavior, interests and personality.

DIFFERENCE IN RESPONSE TO STORIES READ TO A CHILD INDIVIDUALLY AND IN A GROUP. M. J. Sparling under direction of M. L. Mattson, Purdue Univ. (Master's Thesis). IN PROGRESS

The subjects are 20 children, enrolled in the Purdue Nursery School and ranging in age from 2 years 2 months, to 4 years 6 months, also a number of children enrolled in the W.P.A. Nursery School. Eight different stories (Unfamiliar to the children) are read to the children individually and in group of five. A rating scale (as objective as possible) is being used as the method of recording the responses to the stories. The scale is analyzed according to positive and negative responses.

THE FAMILY

Child Development (Continued)

Teaching and Guidance (Continued)

I. Q. VARIATIONS OCCURRING IN CORNELL NURSERY SCHOOL CHILDREN.

M. E. N. Ford, N. Y. State Coll. Home Econ., Cornell Univ. (Professional). Reported in Notes on Research No. 5, p. 25, 1940.

IN PROGRESS

A professional paper reporting a ten-year program of psychological examination.

THE EFFECT OF SIZE OF INITIAL SERVINGS UPON THE EATING EFFICIENCY OF NURSERY SCHOOL CHILDREN. M. Johnson under direction of G. Chittenden, Iowa State Coll. (Master's Thesis). IN PROGRESS

The purposes of this study are to find, by means of a questionnaire, the lunch time procedures used in a selected group of nursery schools in the United States with especial emphasis on the size of initial servings to discover whether the size of initial servings of food has any measurable effect upon the eating efficiency of a group of nursery school children at Iowa State College. An experimental situation in which size of initial servings is varied and the eating behavior of the children observed will be devised.

RESPONSIBILITIES OF HOUSEHOLD EMPLOYEES FOR YOUNG CHILDREN IN A SELECTED GROUP OF HOMES. E. F. Barnes under direction of K. Roy, Kansas State Coll. (Master's Thesis 1942). IN PROGRESS

Responsibilities that are given household employees in caring for young children, methods of guidance used by household employees, and responses of children to these methods are being studied in a selected group of families. Data are being collected through interviews with mothers, with household employees, and through diary records taken during four home visits to each family. It is expected that significant attitudes and relationships between parents, children, and household employees will be revealed.

THE RELATIVE EFFECTIVENESS OF SUGGESTIONS, REQUEST AND COMMANDS WITH PRESCHOOL CHILDREN. M. M. McNab under direction of T. F. Vance, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

Children of the Iowa State College and the Ames W.P.A. nursery schools are used as subjects. Experimental situations are being used which follow the pattern of interesting a child to a high degree in a particular activity and then distracting him from it by a mere suggestion, a request or a definite command; the order of use of these three will follow a schedule which will equalize the temporal sequence.

THE FAMILY

Child Development (Continued)

Teaching and guidance (Continued)

MEASUREMENT OF THE BEHAVIOR OF CHILDREN OF NURSERY SCHOOL IN MORNING SESSION. E. L. Neidengard under direction of M. F. Reed, Virginia Polytech. Inst. (Master's Thesis 1942). IN PROGRESS

The purpose is to develop a reliable technique for measuring behavior of preschool children and to discover the proportion of time that children spend in integrative, dominative, and other behavior. Behavior of individual children will be tabulated during five minute intervals, analyzed, and treated statistically. This is one of a series of studies on domination and integration and is preliminary to tabulating the interaction between teacher and child behavior. Eventually this study may contribute to our knowledge of techniques which adults can use to help children achieve more nearly their optimum growth.

STANDARDS OF ACHIEVEMENT IN HABIT FORMATION FOR THE PRESCHOOL CHILD: RELATIVE RECOMMENDATIONS FOR THE TWO TO FIVE YEAR OLD IN WASHING, DRESSING, SLEEPING, EATING AND ELIMINATION. E. L. Sutton under direction of R. F. Steidinger, Tex. State Coll. for Women (Master's Thesis 1942). IN PROGRESS

The purpose of this thesis is to present objectively the standards of achievement in habit formation as given by as many different authorities as possible. In so doing, these recommendations will be amassed in one convenient source and agreement, disagreement and general trends of thought with possible convergence will be revealed. The general procedure is to secure information from as many authorities as possible through search of literature--theoretical and philosophical as well as reports of experimental studies.

Social and emotional development

A STUDY OF SOME TYPES OF LEADERSHIP SHOWN BY PRESCHOOL CHILDREN AND THE SPECIFIC RESPONSES OF OTHER CHILDREN TO SUCH LEADERSHIP. D. H. Wells under direction of I. H. Gross, Mich. State Coll. (Master's Thesis 1941). Submitted for publication Child Development. On file College Library, Mich State Coll. COMPLETED

Specific types of leadership and response behavior in social relationships of nursery school children were recorded in twenty-five 3-minute diary records of the social activity of each of 12 children at free play by time-sampling. The records were analyzed for leadership and response behavior according to categories derived from previous observations. Frequent playmates were most cooperative and showed the most leadership. Play material was most important to unintentional leadership, which was 17 percent of all leadership. Suggestions and requests, used often by all children, received cooperation less often than commands. Leadership and popularity were related to cooperation but not to percentage of verbal activity. Both degree of friendship and type of leadership affected responses. Specific directions achieved better results than tactful suggestions among children.

THE FAMILY

Child Development (Continued)

Social and emotional development (Continued)

PROBLEM SOLVING BY CHILDREN IN DAILY NURSERY SCHOOL SITUATIONS. G. Johnson under direction of L. Kell, Kans. State Coll. (Master's Thesis 1941) On file Kans. State Coll. Library. COMPLETED

The kinds of problem situations experienced by three groups of children during free play in a nursery school and the methods the children used in attempting to solve their problems were studied by means of diary records. Situations into which an adult entered unasked were omitted, which affected the results. Out of 482 attempted solutions to 200 problems the children gave up in only 27 cases and showed overt evidence of emotion in 18 cases. About two-thirds of the problems were with materials and one-third with other children. One-fourth of the methods were direct attempts to manipulate the material itself with the hands. Five percent of the problems appeared to be solved by insight.

THE PRESCHOOL CHILD'S AWARENESS OF DIFFERENCES IN DISCIPLINE OF PARENTAL AND TEACHER AUTHORITIES AS SHOWN BY REACTIONS TO EXPERIMENTAL SITUATIONS. H. L. Crum under direction of T. F. Vance, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

To determine whether experimental situations involving the use of dolls would reveal the child's awareness of differences in discipline of mother, father, and teacher, 25 boys and 17 girls, with a mean age of 4 years and 4 months, from the Iowa State College and W.P.A. nursery schools were given an experimental procedure in which each child was presented individually with a situation in which one doll represented the child himself and another, the authority. The situations were: crayoning on the table and refusing to put toys away. Only 23.3 percent of a total of 288 possible responses were refusals; these were approximately equally distributed among the three authorities. Spanking was the most frequent punishment of all authorities and crying was the most frequent response.

CERTAIN ASPECTS OF RELIGIOUS ENVIRONMENT IN HOMES OF CHILDREN OF THE IOWA STATE COLLEGE NURSERY SCHOOL. B. G. Smith under direction of T. F. Vance, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

A survey of certain aspects of the religious environment in the homes of 40 children of the Iowa State College Nursery School was made from the answers of mothers in a personal interview to questions pertaining to concepts of: God, Jesus, prayer and song, Bible and Bible stories, church and Sunday School, heaven, hell, and nature including life and death. At least 50 percent of the mothers read nature stories to children, called attention to various aspects of nature and answered questions about it, told story of the birth of Jesus, used the words "God" and "Jesus" in conversation with or near their children, attended church services, taught children to say a bed-time prayer and answered questions about death.

THE FAMILY

Child Development (Continued)

Social and emotional development (Continued)

RELATIONSHIP OF SIZES OF HUMAN FIGURES IN YOUNG CHILDREN'S DRAWINGS.

G. L. Fittro under direction of T. F. Vance, Iowa State Coll. (Master's Thesis 1942). On file Iowa State Coll. Library. COMPLETED

The ability of young children to express the concept of size was shown by drawing four human figures: a father, mother, child, and a baby. The subjects, who were from superior homes, had a mean IQ of 119 and an age range from three years to seven years and seven months. Except for a tendency to draw the father larger than the mother, the mean comparative differences among the figures conform to reality. The mean height of the figures is greater than the mean width. The mean variations of the figures in size was less for the older than the younger children.

THE RELATION BETWEEN LANGUAGE OF YOUNG CHILDREN AND SOCIAL GROUPINGS.

R. M. Williams under direction of M. L. Mattson, Purdue Univ. (Master's Thesis 1942). Reported in Notes on Research No. 6, p. 196, 1941. COMPLETED

The relationship of different sized groups to the language usage of pre-school children was shown by language records made in a free play situation of six children, three and a half years of age, enrolled in the Purdue Nursery School. The subjects were arranged in different social groupings varying from a single child to three children and an adult. Ten minute language records were made on the Fonda Reproducing Machine which recorded on an acetate tape all verbalization. Transcriptions of these records were analyzed into four classifications: Type of sentences, parts of speech, social usage and Piaget's functional classification. It was found that the grouping of two children and an adult averaged more verbalization and engaged in more friendly intercourse than any of the other sized groups.

CONCEPTS OF QUANTITY POSSESSED BY A GROUP OF PRESCHOOL CHILDREN. E. L. Musgrove under direction of G. Chittenden, Iowa State Coll. (Master's Thesis). IN PROGRESS

The purpose of this study is to discover the concepts of quantity which are possessed by a group of three- and four-year-old children in attendance at a college nursery school and at a WPA nursery school. A test has been devised in which the investigator presents each of the fifty subjects with a series of problems, the solution of which depends on his understanding of certain concepts of quantity. The results will indicate: (1) the number of such concepts possessed at each ^{age} level, and (2) the number of such concepts possessed by college nursery school children as compared to the number possessed by WPA nursery school children.

THE FAMILY

Child Development (Continued)

Social and emotional development (Continued)

SELF AND PARENTAL RATING OF FRESHMEN IN THE PONTIAC HIGH SCHOOL, PONTIAC, ILLINOIS, USING THE BERNREUTER PERSONALITY INVENTORY. R. A. Galloway under direction of T. F. Vance, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

Adolescent self-ratings, using the Bernreuter Personality Inventory, are compared with the ratings of the parents of the same adolescents using the Bernreuter Personality Inventory transcribed to the third person. Forty girls and thirty-three boys with their 68 mothers and five fathers completed the inventories. Mothers rate their daughters as being less prone to emotional conflicts, less self-sufficient, more extroverted and more domineering than the daughters rated themselves. Mothers' ratings are in closer agreement with sons than with daughters.

PARENT-ADOLESCENT ADJUSTMENT, ITS MEASUREMENT AND SIGNIFICANCE. L. H. Stott. M. Fedde, Univ. Nebr., adviser (Professional). (Part of larger project, Patterns of Rural Family Life, Their Significance in Relation to Personal Development of Children and the Basic Factors Associated with Them). Published in Character and Personality 10 (1941), pp. 140-150. COMPLETED

Scores were obtained on 490 rural adolescents and a scale constructed to measure the amount of confidence, affection and companionability in the home-situations of high school age children. The scale was found to be sufficiently reliable for our purpose (.91). A correlation of only .23 between members of 84 sibling pairs indicated that whatever the scale measures is an individual matter. High correlations between these scores and social adjustment scores were interpreted to mean that our scale measures individual parent-adolescent adjustment which varies from one child to another in the same family. The importance of parental wisdom and of individual treatment of children was stressed.

A COMPARISON OF FATHER AND MOTHER RATINGS OF THE PERSONALITY OF THEIR ADOLESCENT BOYS AND GIRLS WITH THEIR ADOLESCENTS' SELF-RATINGS. B. R. Mitchell under direction of T. F. Vance, Iowa State Coll. (Master' Thesis). IN PROGRESS

Father and mother ratings of their adolescent children on the Bernreuter Personality Inventory, transcribed to the third person, are compared with the self-ratings of the adolescents. An equal number of rural and urban families are serving as subjects. Parents are visited by the investigator and fill out the inventories while she is present. The adolescents fill theirs out during a class period in school.

THE FAMILY

Child Development (Continued)

Social and emotional development (Continued)

EVIDENCE OF SECURITY IN HOME ECONOMICS STUDENTS LIVING IN THE HOME-
MAKING APARTMENTS AS STUDIED IN THEIR USE OF EQUIPMENT. M. Maxwell
under direction of E. B. Waring, N. Y. State Coll. Home Econ., Cornell
Univ. (Master's Thesis 1942). IN PROGRESS

Behavior of the students with such equipment as dishwasher, mixer, stove,
refrigerator, washing machine, and ironer, was observed for evidence of
variation among the students in security and in performance. Changes
observed in attitude and ability were related, insofar as possible,
with the girl's past experience and present experience, especially the
instruction and other forms of guidance. Such understanding of behavior
in the limited activities with equipment will, it is hoped, offer a
basis for understanding the needs of the students as persons.

AN INVENTORY TO MEASURE "PSYCHOLOGICAL WEANING" OF COLLEGE FRESHMEN
GIRLS. (Tentative Title). I. Diehl under direction of E. L. Kelly,
Purdue Univ. (Master's Thesis). Work dropped temporarily. IN PROGRESS

Items judged to measure "weaning" were gathered from readings, exper-
iences, and conferences with leaders in the field. These items were
judged according to whether they actually do measure "weaning", whether
they apply to all college freshmen girls equally, and whether they are
stated in unambiguous terms so that all will understand clearly. Over
half were discarded. The remaining items were further validated by
giving the inventory to ten girls.

INSTITUTIONAL MANAGEMENT

A STUDY OF QUALITY AND ECONOMY IN THE SELECTION OF POTATOES FOR INSTITUTIONS. M. A. Wood and K. W. Harris, N. Y. State Coll. Home Econ., Cornell Univ., adviser (Professional). Coop. with Depts. of Economics of Household, Agr. Econ., Veg. Crops, Foods and Nutr. Probable date of completion 1942. Reported in Notes on Research No. 6, p. 201, 1941.
IN PROGRESS

Cooking quality tests are being continued on the varieties commonly grown in central-western New York. At the end of this, the third year, 300 samples from these varieties will have been tested; this should give an adequate number on which to report varietal performance according to type of soil, growing period, and state of maturity. Peeling-waste determinations on lots of sized tubers, peeled by hand, indicate a 5 percent difference in waste; this possibly is significant, since size is only one of the several factors contributing to waste. Peeling-waste determinations are being continued on samples containing specific defects.

ANALYSIS OF THE FOOD RATION PROVIDED FOR INMATES OF THE IOWA STATE PENITENTIARY FOR THE YEARS 1935 TO 1941 INCLUSIVE. I. Smith, under direction of F. Gleiser, Iowa State Coll. (Master's Thesis 1942).
IN PROGRESS

To determine per pound per man per day ration of food served and adequacy of ration at the Iowa State Penitentiary for a seven year period. Data for quantities of food provided and number of meals served will be taken from monthly provision reports of the Iowa State Penitentiary. Articles of food will be divided into fourteen food groups as outlined for Federal prison ration by Howe and MacCormick. The ration will be compared with ration standards for Federal prisoners and for the United States Army.

RELIABILITY AND USEFULNESS OF A PLAN FOR SCORING CANNED FOODS PURCHASED FOR PURDUE UNIVERSITY FOR FOUR YEARS. M. Hirt, under the direction of E. Gamble, Purdue Univ. (Master's Thesis 1942) IN PROGRESS

This study is a continuation of a problem started in 1938 for the organization of a plan for scoring canned foods purchased for four foods units on the campus. Samples of canned goods submitted by different vendors were tested and scored according to standards promulgated by the U.S.D.A. and the results were given to the purchasing agent who asked for bids from acceptable sources of supply. After four years of this procedure for purchasing, the interest is in finding the value of such reports to the food buyer. For his information data will be collected to determine the consistency of scores for foods from one vendor for four years, to determine comparative prices of different vendors and to determine the relative scores and prices of canned foods from different sources of supply.

INSTITUTIONAL MANAGEMENT

SOME MANAGEMENT POLICIES OF THE FOOD SERVICE DEPARTMENTS OF CERTAIN COLLEGE RESIDENCE HALLS. C. E. Willey, under direction of B. B. West, Kans. State Coll. (Master's Thesis 1941). On file Kans. State Coll. Library. COMPLETED

To obtain information relating to the physical plants of certain residence halls and to determine the policies of management used in food service in these halls. Check-lists were sent to 163 directors of residence halls; 83 were returned. The residence halls studied were divided into four groups: State, endowed non-denominational, endowed denominational, and a miscellaneous group including private and municipal schools. The data thus secured were tabulated, analyzed and evaluated. The building program for residence halls has been increased rapidly since 1915. The physical plants and administrative policies of these halls vary widely among the four groups, with less variation within each group.

THE TRAINED DIETITIAN IN COLLEGE FOOD SERVICE. C. E. Palmer, under direction of F. Gleiser, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

The purpose of the study was to secure data on the administrative practices prevailing in college food service, to obtain information useful in developing more efficient practices and to establish standards for college food service administration. Seventy-three college and university food directors responded to questionnaires sent to them on managerial policies maintained by trained dietitians. The findings would indicate: (a) A need for improving management practices in college food service units; and (b) making use in the employment of a dietitian of a definite job specification.

THE DEPRECIATION OF CERTAIN PIECES OF POWER EQUIPMENT - ACCORDING TO TYPE AND AMOUNT OF USE. E. Wakefield, under the direction of E. Terrell, Univ. Washington. (Master's Thesis). COMPLETED

Studies were carried on in various Seattle institutions to determine the rate of depreciation of the certain pieces of power equipment. Five machines were chosen: A dishwashing machine; a potato peeler; a grinder and chopping machine; a mixer; and a slicer. The selection for study was made on the basis of frequency of use, initial expenditure and upkeep cost. Records of kind and amount of use were recorded for a ten-day period in eighteen institutions. History tables were set up giving kind, age, cost and size of machines. An appraisal was made on each piece by two equipment experts. The rates of depreciation were computed and compared with figures given in Paton's Accountants Handbook.

HOME ECONOMICS EDUCATION

Curriculum

PROVISIONS FOR ELEMENTARY SCHOOL HOME ECONOMICS INSTRUCTION IN THE STATE CURRICULUM PROGRAM. H. Reese under direction of I. R. Melbo, Univ. So. Calif. (Master's Thesis 1941). On file Univ. So. Calif. Library. COMPLETED

The purpose was to study the states' curricula of home economics in the elementary school. Materials from all states and possessions were secured by mail. Eight states and five possessions have placed authority for curricula making in the hands of local authorities. Twenty-two states and one possession recommended that a unit on the home should be studied in the first grade. Only two states and one possession teach home economics as a laboratory subject, while twenty-eight states and one possession recognize its value. Work on the home is predominantly in the field of social studies.

A COURSE IN HOME BUILDING AND CONSTRUCTION FOR SECONDARY SCHOOLS. R. W. Johnson under direction of C. C. Crawford, Univ. So. Calif. (Master's Thesis 1941). On file Univ. So. Calif. Library. COMPLETED

The primary purpose of this study was to present a course of study in practical facts and skills of home building that would be used to advantage in after school years. A year was spent in observation and investigation, preparation of questionnaires, and visiting to determine the need and interests of the child. This was followed up by a voluntary segregation of boys and girls into homemaking classes. The course was determined by discussions and questionnaires. Mexican students showed an increase in mental age of 2 years and 1 month. Some classes in the control group failed to make the same progress; others surpassed it. The statistical study of student abilities was used to show the merit of the course of study.

A STUDY OF THE HOMES OF EIGHTH GRADE PUPILS OF DAYTON, OHIO, WITH IMPLICATIONS FOR THE HOME ECONOMICS CURRICULUM. H. B. Hodgson, under direction of A. D. Pressey, Ohio State Univ. (Master's Thesis 1941). On file Ohio State Univ. Library. COMPLETED

The purpose of this study was to become acquainted with the home conditions and experiences of 8th grade girls in a school district chosen as representative of the average economic level for the city of Dayton, Ohio. Sixty-four families were surveyed by means of a detailed questionnaire. Using the findings of the survey and following the general principle that the home economics curriculum should be adjusted to promote continuous growth and development of the individual in all areas of living as well as achieving a democratic way of life, recommendations were made for revising the elementary home economics curriculum for Dayton.

HOME ECONOMICS EDUCATION

Curriculum (continued)

A STUDY OF THE SCOPE AND CONTENT OF CONSUMER EDUCATION IN THE HIGH SCHOOL HOME ECONOMICS CURRICULUM. P. Walker under direction of A. M. Stevenson, State Coll. of Wash. (Master's Thesis 1941). On file State Coll. of Wash. COMPLETED

The purpose of this study was to examine the scope and content of consumer education courses in the high school home economics curriculum as a basis for curriculum revision. Nine recent courses of study and four textbooks were analyzed for scope, in relation to basic areas and topics; content, as indicated by the number and extent of consumer problems in eight basic areas; and form, as shown by separate courses or units. Results showed the scope of consumer education as found in the home economics curriculum to be 85.9 percent of the entire field of consumption. Textbooks showed a scope of 60.5 percent. Greatest emphasis in the curriculum was given to the areas of Consumer Goods, Consumers' Financial Problems and Consumer Organizations. Textbooks emphasized Consumer Organizations, General Buying Problems, and Consumers' Financial Problems. Courses of study recognized 242 different problems, and textbooks 155. The courses of study tended to emphasize more practical problems than the textbooks.

A STUDY OF HOME EXPERIENCES OF GIRLS IN THE DE PUE HIGH SCHOOL AS A BASIS FOR A PROGRAM FOR TEACHING HOMEMAKING. E. H. Nelson under direction of S. Woodruff and H. Faite, Univ. Iowa (Master's Thesis 1941). On file State Univ. Iowa Library. COMPLETED

A questionnaire about their home life answered by 108 girls in grades 9 to 12 in De Pue, Illinois, indicated that the teaching program could be best enriched by giving particular emphasis to: a) housing and home furnishing, b) child care and guidance, c) family relationships, and d) foods and nutrition. Outlines of these four teaching units are developed in detail and the content of a three year program is given less fully. Ways are suggested for coordinating the findings of the questionnaire with other departments in the school program.

EDUCATIONAL IMPLICATIONS OF CONFLICTS BETWEEN MOTHERS AND DAUGHTERS OVER CERTAIN PRACTICES OF NINTH AND TENTH GRADE GIRLS FROM JOHNSTON CITY TOWNSHIP HIGH SCHOOL, ILLINOIS. O. F. Sharp under direction of R. Friant and M. F. Fritz, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

In this study an attempt is being made to find points of conflict between daughters and their mothers that the home economics program might conceivably help to resolve. Personal interviews with students and parents and personal data sheets kept by the girls are used in getting this information. This investigation is one attempt to study the basic needs of students and the findings may be helpful in curriculum revision.

HOME ECONOMICS EDUCATION

Curriculum (Continued)

UNIT IN CHILD CARE FOR KINLOCK PARK JUNIOR HIGH SCHOOL. E. Armstrong under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

The study was made to determine the child care responsibilities of girls in Kinlock Park Junior High and a unit to cover these needs was planned.

DETERMINING CURRICULAR NEEDS BY MEANS OF A STUDY OF THE ENVIRONMENTAL BACKGROUND AND ACTIVITIES OF HIGH SCHOOL GIRLS THROUGH ONE HUNDRED HOME VISITS. J. B. Lund under direction of A. Haley, Univ. Wash. (Master's Thesis 1941). On file Univ. Wash. Library. COMPLETED

This study was undertaken to determine the needs and interests of girls in grades 8-11 to discover the effect of home economics teaching in stimulating home activities, to note changes of interest over a three-year period. Data were secured through questionnaire, school records and systematic home visits. Evidences were found of need for instruction in wise use of family resources, wise purchasing, especially of home furnishings. Much interest was shown in cooking and baking, little in meal planning and nutrition. Deep interest in children was shown by eighth grade girls. Home visits were shown to be excellent medium through which Home Economics teacher may gain insight into pupil and community needs.

RELATIONSHIP BETWEEN HOMEMAKING CLASSES AND 4-H CLUBS IN HOMEMAKING EDUCATION FOR GIRLS. R. F. Clark under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

The study was made for the purpose of determining the possibility of correlating the work of homemaking classes in high school and of 4-H clubs to make a stronger homemaking program in Jefferson County, Colorado.

SUGGESTED BASIC LEARNINGS FOR HIGH SCHOOL CLOTHING AND TEXTILE UNITS. L. Stinson under direction of L. M. Welch, Univ. Okla. (Master's Thesis 1941). On file Univ. Okla. Library. Reported in Notes on Research No. 5, p. 177, 1940. COMPLETED

In order to determine the basic clothing and textile learnings needed by high school girls, thirty-five persistent problems were assembled from textbooks, state courses of study and the investigator's teaching experience. These problems were evaluated by twenty homemaking teachers of Oklahoma as "very important", "important", or "unimportant". Sixteen problems were checked by fifty percent of the teachers as "very important". Generalizations needed for the solution of these sixteen problems were compiled and evaluated by six clothing and textile authorities. The use of persistent problems and generalizations was illustrated by a unit on art related to clothing.

HOME ECONOMICS EDUCATION

Curriculum (Continued)

A STUDY OF THE COORDINATION OF THE CONCEPTS OF CONSUMER EDUCATION DEPARTMENTALIZED IN THE CENTRAL UNION HIGH SCHOOL OF EL CENTRO, CALIFORNIA. W. D. Garner under direction of E. G. Blackstone, Univ. So. Calif. (Master's Thesis). On file Univ. So. Calif. Library.
COMPLETED

The purpose of this study was to determine if there is a need for a special course in Consumer Education in Central Union High School, of El Centro, California. A selected list of concepts was prepared and charted. Department heads selected those concepts unique in their field, and the results were tabulated. It was found that instruction in major concepts of consumer education was completely inadequate for the welfare of the student. The author recommended a special course in consumer education, and made a series of six suggestions as to possible subject instruction.

A UNIT OF STUDY IN HUMAN RELATIONSHIPS. A. Rundle, under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

A study was made to determine what should be included in a course or unit of study in teaching human relations in the high school.

A STUDY OF THE DEVELOPMENT OF ART APPRECIATION THROUGH EXPERIENCES INCLUDED IN A HOME ECONOMICS CURRICULUM. Sister M. Lucienne under direction of C. Tucker, La. State Univ. (Master's Thesis).
IN PROGRESS

The purpose is to study the changes in the students' art appreciation through Home Economics instruction. A curriculum is being organized in the Home Economics Department for the purpose of developing art appreciation and a scale has been planned and validated by the experimenter for the purpose of measuring art appreciation of high school students.

THE USE OF THE MAIL-ORDER CATALOGUE AS A LEARNING AID IN SOLVING BUYING PROBLEMS OF HIGH SCHOOL STUDENTS. K. Wilbanks under direction of C. Tucker, La. State Univ. (Master's Thesis).
IN PROGRESS

The purpose of this investigation is to study the articles purchased by Home Economics students of Jena, Louisiana, High School, from mail order houses. A record of articles bought by students and their families from mail order houses for a period of approximately six months is being kept. Lists of articles purchased, where the purchases were made, and causes of dissatisfaction from articles bought by mail are being compiled. Suggestions for the use of the catalogue in class in helping students to develop techniques of purchasing by mail order will be made.

HOME ECONOMICS EDUCATION

Curriculum (Continued)

THE BUYING EXPERIENCES OF A GROUP OF HIGH SCHOOL PUPILS USED AS A MEANS OF DEVELOPING BUYMANSHIP TECHNIQUES. Sister M. Malachy under direction of C. Tucker, La. State Univ. (Master's Thesis). IN PROGRESS

Interviews are being made to determine the purchases made by pupils. Records of purchases made by students are being kept during a nine-months period. These materials will serve as the basis for the organization of problems and experiences designed to develop techniques of purchasing on the part of high school girls.

A COURSE OF STUDY IN RELATED ART FOR VOCATIONAL HOMEMAKING SCHOOLS IN ILLINOIS. H. M. Hamilton under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

A determination of the type of course of study in related art appropriate for a related arts course in vocational homemaking schools in Illinois.

STANDARDS FOR TEACHING HOME ECONOMICS TO NEGRO GIRLS. C. E. Ballard under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

A study was made to determine how family economic standards and housing conditions should be used as a basis for teaching home economics to Negro girls in Washington High School.

A PLAN FOR TEACHING ARTS AND CRAFTS THROUGH HOME ECONOMICS COURSES IN A SMALL LIBERAL ARTS COLLEGE FOR NEGROES IN LITTLE ROCK, ARKANSAS. R. E. Dozier under direction of L. E. Smith, Univ. of Iowa (Master's Thesis). On file State Univ. of Iowa. COMPLETED

A plan for teaching arts and crafts as an integral part of the home economics courses was developed. An investigation was made of educational thought and opinion bearing upon the problem; of curricula of negro schools with similar problems; of state courses of study; and a questionnaire was submitted to students in the college concerning their activities and needs. It was concluded that arts and crafts could be incorporated in home economics courses with home furnishing and clothing selection, with a resulting enrichment of the courses in question and a widening of the interests of the students.

HOME ECONOMICS EDUCATION

Curriculum (Continued)

THE HOME ECONOMICS PROGRAM IN FOUR JUNIOR COLLEGES IN KANSAS. H. A. Blair under direction of L. Rust, Kansas State Coll. (Master's Thesis 1941). On file Kansas State Coll. Library. COMPLETED

To obtain information helpful in curricular studies of home economics in junior colleges data were obtained from school records and interviews with administrators, teachers and former students in four colleges. A marked increase in total enrollment and some increase in home economics enrollment was noted. Although terminal students outnumber preprofessional students, home economics programs were planned primarily for the preprofessional students, with offerings confined largely to food and clothing courses. Few courses were offered to women preparing for home living and homemaking responsibilities. Only a limited number were served by the home economics program.

DETAILED UNITS FOR A COLLEGE COURSE IN SCHOOL FOOD SERVICE FOR HIGH SCHOOL TEACHERS OF HOME ECONOMICS. G. E. Dziegiel under direction of L. Rust and B. B. West, Kansas State Coll. (Master's Thesis 1941). On file Kansas State College Library. COMPLETED

To ascertain the need and status of present college courses in food service for high school teachers and to plan the content of such a course, check lists were sent to 52 colleges and universities. The data obtained showed a need for such a course. Detailed units for a course in food service organized on the unit problem plan were written.

A SYLLABUS FOLLOWED IN TEACHING CHILD CARE AND DEVELOPMENT. N. B. McFee under direction of L. S. Buckey, George Peabody Coll. (Master's Thesis 1942). On file Peabody Library. COMPLETED

The purpose of this study was to organize curriculum content in Child Care and Development (on the college level) into a syllabus to be used as a guide in teaching. In carrying on this study the threefold nature of the problem had to be kept in mind. The first phase dealt with the selection and organization of materials; the second, the development of the procedure used in teaching; and the third phase consisted of the evaluation of the first and second phases. Results regarding procedures used and the evaluation techniques employed show that: (1) problem solving procedure gives students practice in cooperative endeavor; (2) critical evaluation at set intervals is beneficial to students and instructors; and (3) the evaluation program participated in by students and teachers gave evidence of effective learning and teaching.

HOME ECONOMICS EDUCATION

Curriculum (Continued)

IMPLICATIONS OF AN ANALYSIS OF ENROLLMENT IN A COLLEGE DEPARTMENT OF HOME ECONOMICS. R. T. Lehman, Ohio State Univ., (Professional). (Part of larger project, Guidance-Research Program). IN PROGRESS

The purpose of this investigation of enrollment in the School of Home Economics of the Ohio State University is to discover trends and to note their implications for the curriculum and for student guidance. It includes: 1) a study of the number of individuals enrolled, course enrollments, and degrees over a twelve year period; 2) a summary of student persistence and mortality in recent years; and 3) something of the composition of the student body during that time.

A DETERMINATION OF GUIDING PURPOSES FOR A REVISION OF THE HOME ECONOMICS EDUCATION CURRICULUM AT THE TEXAS STATE COLLEGE FOR WOMEN. A. L. Blakeney under direction of J. Christian, Tex. State Coll. for Women (Master's Thesis 1942). IN PROGRESS

In this investigation an attempt will be made to determine through questionnaire and personal conference the purposes for home economics education which are held by faculty members and students. The writer will attempt to determine the points of agreement and disagreement of these purposes with those consistent with a democratic philosophy of education. It is thought that those findings will aid all those working in the program to agree upon some purposes compatible with the democratic idea.

ORGANIZATION AND METHODS OF INSTRUCTION IN COSMETOLOGY. A. T. Logan under direction of F. J. Weersing, Univ. So. Calif. (Master's Thesis 1941). On file Univ. So. Calif. Library. COMPLETED

The purpose of this study was to note the historical development of cosmetology to formulate its fundamental principles, state procedures, and propose a teacher's source unit. The information was obtained through library study, questionnaire, interviews with authorities, and observations in classes of cosmetology. There is a real need for trained beauty operators. The teachers studied had at least seven years in the field and many had their bachelor's degrees. On the basis of a questionnaire, a source unit of instruction was proposed.

A GUIDE FOR A HOME FURNISHING WORKSHOP. R. P. Miller under direction of A. M. Stevenson, State Coll. of Wash. (Master's Thesis). IN PROGRESS

The purpose of this study is to provide a manual to be used as a teaching aid in a home furnishing workshop. The content and form of the guide will be criticized by specialists, and the instruction sheets will be tried out in the classroom. Time records on problems, a check sheet, and anecdotal records will be used to evaluate the guide.

HOME ECONOMICS EDUCATION

Curriculum (Continued)

A COURSE IN CONSUMER EDUCATION. P. Van R. Adams under direction of C. C. Crawford, Univ. So. Calif, (Master's Thesis 1941). On file Univ. So. Calif. Library. COMPLETED

The purpose of this study was to present a course of study whereby students as consumers would be adequately prepared to protect themselves against fraud. The writer's method was subjective, including research of material in the field, analysis of courses on consumer education, interviews, and personal reaction from timely experience. Units of work were prepared as a consequence. The author endeavored to construct a basic framework on which material could be added to better prepare youth in wise spending of money.

THE ORGANIZATION AND EARLY FUNCTIONING OF A COOPERATIVE PROGRAM PLANNING COMMITTEE FOR HOMEMAKING EDUCATION. M. McCoy under direction of G. M. Henderson, Coll. Home Econ., Cornell Univ. (Master's Thesis 1941). On file Office of Adviser. COMPLETED

Preparatory to trying some procedures for organizing a cooperative program planning committee for homemaking education in a rural community, the investigator analyzed, first, her beliefs about education and family life in a democracy and, second, the implications of this philosophy for program planning and organizational procedures and for criteria by which to evaluate results. The procedures were then tried in a small community and the steps, difficulties, and results recorded. Generalizations, based on this limited experience are presented in summary, as hypotheses for further trial. Photographs are included in the report, showing charted homemaking data, gathered previously in the community by other investigators.

INFERENCES APPLICABLE TO PROGRAMS OF EDUCATION IN ARTS AND CRAFTS FOR RURAL WOMEN DRAWN FROM A STUDY OF COMPARABLE PROGRAMS IN NORWAY AND SWEDEN. M. H. Clausen under direction of M. S. Lyle, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

To find which procedures used in conducting work in home arts and crafts among rural women of Norway and Sweden have implications for building an educational program for rural women of similar background in North Dakota, interviews were held with state, district, and local directors of arts and crafts associations in Norway and Sweden and with six Norwegian and four Swedish women selected as representative. The data are being analyzed to discover the cultural and economic satisfaction derived by the women as well as the educational procedures followed. Case studies will be presented.

HOME ECONOMICS EDUCATION

Needs and practices

TECHNICAL WORDS IN NINTH GRADE FOOD REFERENCES COMMON TO GENERAL SCIENCE AND HOME ECONOMICS COURSES. E. L. Dixon under direction of H. Chadderdom, Iowa State Coll. (Master's Thesis 1941). On file Library of Iowa State Coll. Reported in Notes on Research No. 6, p. 216, 1941. COMPLETED

AN EXPLORATORY STUDY OF THE DIFFICULTIES ENCOUNTERED BY A SELECTED GROUP OF STUDENT TEACHERS. W. Johnson under direction of D. C. Kent, Univ. Tenn. (Master's Thesis 1941). On file Univ. Tenn. Library. COMPLETED

A study of factors contributing to difficulties encountered by student teachers. Case studies of twelve student teachers were compiled. Findings indicated that those who had unusual difficulty in making desirable adjustments tended to be those who had ranked as average for personal qualities and abilities, or scholastic ratings, had earned part of their way through school, were transfer students, and whose greatest interests were in areas other than home economics. It was recommended that all available information concerning students be analyzed at the beginning of their experience in student teaching and that special attention be given to those who fall into the groups described above for the purpose of guiding them in making more successful adjustments.

A COMPARISON OF PROBLEMS MET BY THE SAME GROUP WHEN STUDENT TEACHERS AND LATER AS REGULARLY EMPLOYED HOME ECONOMICS TEACHERS. P. Fierce under direction of A. D. Pressey, Ohio State Univ. (Master's Thesis 1941). On file Ohio State Univ. Library. COMPLETED

This study shows that there is a similarity between problems of student teachers and of first year teachers of home economics. A survey indicated that creating and maintaining interest and understanding high school pupils were difficult for both. At neither level has the meeting of individual needs of students or methods of teaching been sufficiently considered. To improve the teacher education program the following suggestions were made: (1) make detailed evaluation of student teachers, (2) help them formulate a philosophy of education; and (3) to secure needed experiences.

A STUDY OF THE PREDICTIVE VALUE OF THE STRONG VOCATIONAL INTEREST BLANK FOR WOMEN FOR STUDENT TEACHERS IN HOME ECONOMICS EDUCATION. M. E. Mather under direction of J. D. Amberson, Pa. State Coll. (Master's Thesis 1942). IN PROGRESS

Student teachers at the Pennsylvania State College during 1940-42 are to be used as subjects in the study. Their success in teaching, as indicated by grades in student teaching, will be correlated with vocational interest scores, obtained by scoring the test according to the recently devised occupational scale for home economics teachers.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

HOME-VISITING PRACTICES OF VOCATIONAL HOME ECONOMICS TEACHERS OF ALABAMA. M. L. Martin under direction of R. J. Friant, Iowa State Coll. (Master's Thesis 1942). Reported in Notes on Research No. 6, p. 209, 1941. IN PROGRESS

The object of this study is to determine the difficulties of teachers in securing and using information gained through home visits as a basis for improved teacher-education. Data will be secured from reports in the State Department of Education and from teachers and principals by interview and by observation of teachers.

AN ANALYSIS OF WORKBOOKS AND A SURVEY OF OPINION REGARDING THEIR USE AND VALUE IN THE TEACHING OF HOME ECONOMICS. D. M. Laubacher under direction of A. D. Pressey, Ohio State Univ. (Master's Thesis 1941). On file Ohio State Univ. Library. COMPLETED

Eleven workbooks in various phases of home economics were analyzed to discover general features of mechanical makeup, status of author, and range of activities suggested. Questionnaires were sent to publishers and to teachers to discover how widely home economics workbooks are used, and what various people think of their use and value. A majority of the teachers approved but only 47 percent had used them. Few workbooks are published. Suggested activities in the workbooks analyzed ranged in number from 3 to 21. Need for further study of the workbook problem was indicated.

ACTIVITIES OF VOCATIONAL HOMEMAKING TEACHERS OF KANSAS DURING SUMMER EMPLOYMENT. E. M. Lewis under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

An investigation of professional activities to be recommended for home-making teachers in Kansas during the period of summer employment.

ACTIVITIES OF IOWA VOCATIONAL HOME ECONOMICS TEACHERS DURING THE EXTENDED SUMMER EMPLOYMENT PERIOD. M. R. Mulliken under direction of H. Chadderdon, Iowa State Coll. (Master's Thesis 1941). (Part of larger project, Factors Affecting the Supply and Demand of Home Economics Teachers in Iowa). On file Library Iowa State Coll. Reported in Notes on Research No. 6, p. 216, 1941. COMPLETED

STUDENT AND CHILD RELATIONSHIPS IN THE NURSERY SCHOOL. M. Nesbitt, Univ. Maine (Master's Thesis and Professional). (Part of larger project, Student Growth During Four Years of College and First Year of Teaching). On file Univ. of Michigan Graduate School. COMPLETED

Practice of college students with nursery-school children was considered from five points of view. Observational records of Home Economics students' verbalization and action were classified to yield the following information. As a group, students were more integrative than dominative; they seldom used non-recommended methods; they showed extremes in "helping" the child and in leaving him alone; they contributed to more acceptable than unacceptable practices of children. In individual pattern in relationships with children, family background, and personal aspects, there were suggestions of trends or absence of trends which warranted further investigation.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

INTERPRETING DEMOCRACY THROUGH HOMEMAKING EDUCATION AT THE ELEMENTARY LEVEL. M. B. Wilson under direction of J. Christian, Texas State Coll. for Women. (Master's Thesis 1941). On file Tex. State Coll, for Women. COMPLETED

The purposes of this study were 1) to clarify the writer's conception of the democratic ideal together with its educational implications, 2) to show how homemaking in the elementary level can be used to help children understand the democratic way of life, and 3) to offer specific suggestions for helping elementary teachers use home economics subject matter as a means for clarifying the democratic way of life. The writer set forth her philosophy and described its implications for the elementary teacher. The thesis contains a source unit for teachers and in this there are suggested objectives, problems, teaching aids, references, laboratory experiences, field trips, film and bibliography. These conclusions were drawn: 1) Homemaking education has a contribution to offer at the elementary level; 2) teachers and administrators at this level recognize some of these, and 3) teachers at this level need help in relating homemaking to their programs.

THE SOCIAL ADJUSTMENT PROBLEMS OF EIGHTH-GRADE GIRLS IN FIVE PENNSYLVANIA COMMUNITIES. M. Mohny under direction of J. D. Amberson, Pa. State Coll. (Master's Thesis 1942). IN PROGRESS

The purpose of the study is to discover in what manner the social adjustment problems of the eighth-grade girls enrolled in home economics in five different types of communities differ. Eighth-grade pupils in home economics classes in each of the five communities will be given a social adjustment test. Pupils will be grouped on the basis of intelligence scores and the results of this test. Comparisons will be made to discover if problems of these pupils differ from community to community and in what respects. It is hoped this study will give help in the understanding and guidance of this group.

FACTORS INFLUENCING GIRLS IN ELECTING HOME ECONOMICS IN THE NINTH GRADE IN WESTERN MONTANA SCHOOLS. F. Malicke under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

A study was made of the effect that home environment, personal interests, and administration of the school had upon a girl's election of home economics.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

PERSONAL GUIDANCE FOR JUNIOR-HIGH-SCHOOL GIRLS THROUGH THE TEACHING OF HOME ECONOMICS. M. F. Swingle under direction of A. D. Pressey, Ohio State Univ. (Master's Thesis 1941). On file Ohio State Univ. Library.
COMPLETED

This study reveals the need for guidance in personal problems met by the junior-high-school girl and shows how guidance may be given through the teaching of home economics. Getting acquainted with the girls and giving guidance were accomplished by: (1) home visits, (2) anecdotal records, and (3) conferences. A questionnaire concerning the home and family life of the girls, including the leisure-time activities and recreational interests, was given to the one hundred and eighty girls in the writer's home economics classes. She also observed the girls in class, conferred with them informally and discussed the problems with other teachers.

HOMEMAKING AND RELATED ACTIVITIES OF JUNIOR HIGH SCHOOL GIRLS. P. Kerr under direction of G. Steininger, Ohio Univ. (Master's Thesis 1941). On file Library, Ohio Univ.
COMPLETED

The purpose of this study was to determine the activities and interests of junior high school girls in their personal, home, and family life and to discover the wishes of the mothers concerning the girl's participation in home activities. The findings concerning activities were secured from time schedules kept for one week during the school year by 187 girls in the junior high schools; the findings concerning interests from a questionnaire answered by the same girls; the findings concerning wishes of mothers by interviews with 103 mothers of junior high school girls. The results of the study were used as a basis for suggestions for activities and problems for the homemaking course of study for the junior high school.

A CRITICAL STUDY OF AVAILABLE INFORMATION REGARDING HOME ECONOMICS FRESHMEN.(TENTATIVE). R. C. Taylor under direction of M. Pearson, Okla. A. & M. Coll. (Master's Thesis),
IN PROGRESS

Student cumulative files are used as a basis for the study. Charts and graphs are made of the findings in order to arrive at a composite picture of the group. Specific incidents are cited to point out how material is being used. It is hoped that information secured may serve as a basis for an enlarged guidance program and for curriculum revision.

STUDENT GROWTH DURING FOUR YEARS OF COLLEGE AND FIRST YEAR OF TEACHING. M. Nesbitt, Univ. Maine (Professional).
IN PROGRESS

The plan is to study students in the Department of Home Economics, University of Maine, during college and the first year of teaching in an attempt to determine significant factors related to the objective, education for home and family living, and to the method, self-direction. Various aspects of the individual student, as revealed through college records, adjustment to specific situations, faculty and self-ratings, are being studied to determine their interrelationships and change at intervals over a 5-year period.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

A STUDY OF THE NEEDS FOR EDUCATION IN THE USE OF MONEY IN A JUNIOR COLLEGE WITH STUDENTS COMING FROM FAMILIES LIVING ON THE UPPER INCOME LEVELS. E. A. Hungate under direction of M. L. Matthews, Purdue Univ. (Master's Thesis 1941). On file Purdue Univ. Library. COMPLETED

The purpose of the study was to secure information which would make possible better teaching of money management and buymanship at National Park College, Forest Glen, Maryland. Through the use of two questionnaires opinions of students and married and single alumnae concerning their needs and desires for training in money management and buymanship were determined. Questionnaires were returned by 333 students in college and by 103 alumnae. The students expressed little need for training in buymanship and money management and the alumnae did not indicate much interest in the subjects. Those who had studied such subjects showed more interest in them. Suggestions for the reorganization of courses at National Park College were included.

COMPARISON OF THE HOME ECONOMICS ACTIVITIES DESIRED BY THE PARENTS AND THE CHILD IN A PUBLIC SCHOOL SYSTEM OF TEXAS. H. Hoff under direction of L. A. Williams, North Texas State Teacher's Coll. (Master's Thesis 1942). IN PROGRESS

The purpose of this study is to determine what effect the parents' desire for the child's participation in a specified area of homemaking governs the child's choice of activities. The parents of the students enrolled in homemaking in a typical Texas community high school are used as a basis for this study. A questionnaire, personal interviews, conferences, and observation sheets are checked to obtain the necessary data.

PROBLEMS OF STUDENTS IN ADULT HOMEMAKING EDUCATION. R. H. Cook under direction of G. M. Henderson, N. Y. State Coll. Home Econ., Cornell Univ. (Master's Thesis 1943). IN PROGRESS

As one guide for planning future educational experiences for students of adult homemaking education, the investigator is assembling, to present in usable form, the educational leadership problems faced by a few students under specified conditions.

THE EDUCATION AND RESPONSIBILITIES OF NEGRO HOME DEMONSTRATION AGENTS IN TEXAS. L. M. Paley under direction of L. Rust, Kansas State Coll. (Master's Thesis). On file Kans. State Coll. Library. COMPLETED

A study of the education, responsibilities and conditions under which Negro home demonstration agents of Texas work made from check lists, personal interviews and monthly reports gave the following suggestions for preservice education of such workers: inclusion of wide range of courses in all areas and many phases of home economics; intensive instruction in nutrition, family finance, family relations, child guidance, food preservation, production and storage of fruits, vegetables and meats, care of poultry and dairy products and rural home improvement; instruction in adult homemaking education, rural life education and community organization and leadership; an apprentice course similar to teaching participation.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

A STUDY OF FACTORS WHICH INFLUENCED THE ENROLLMENT OF TENTH GRADE STUDENTS IN THE FOODS CLASSES OF THE SENIOR HIGH SCHOOL OF TOPEKA, KANSAS. R. M. Loomis under direction of G. G. Hood, Univ. Colo. (Master's Thesis 1941). Abstracted in Univ. Colo. Studies, Vol. 26, No. 4, p. 109. On file Univ. Colo. Library. COMPLETED

The purpose of the study was to determine the factors which influenced the enrollment of students in foods classes of the Senior High School of Topeka, Kansas. The questionnaire method was used. Findings showed that interest was the primary motive favoring election, and variety of courses offered in other departments was the major factor against enrollment. There was little relation between election of foods and the girls' chosen vocation. Recommendations for various changes were made.

THE RELATION OF THE FOOD ACTIVITIES OF GEORGIA GIRLS TO THE CONTENT OF STATE ADOPTED TEXTBOOKS IN HOME ECONOMICS. J. M. Parker under direction of E. Todd, Univ. Georgia (Master's Thesis 1941). On file Library, Univ. Georgia. COMPLETED

The purpose of this study was to discover to what extent state adopted texts provide information needed by pupils in carrying on their food activities. Records of pupils' home activities were analyzed to discover food activities and state adopted foods text books were analyzed to discover the number of pages of information related to each of the food activities. It was discovered that the six foods texts contain some information related to 35 of the 36 food activities, but that eleven of the activities have less than ten pages of information each. The study reveals the need for supplementing the texts with other reference materials for at least seven of the activities.

FOOD PRODUCTION AND CONSUMPTION PRACTICES IN A SELECTED GROUP OF NORTH CAROLINA HOMES. C. Brendle under direction of M. V. Campbell, Woman's College, Univ. of N. C. (Master's Thesis 1941). On file Library, Woman's Coll., Univ. of N. C. COMPLETED

Weekly food consumption records were secured from 68 school girls and food production and consumption practices obtained from 62 N. C. homemakers. None of the pupils or families had an adequate diet. Whole grains were more inadequate in the diet of both groups, followed in order named, by green and yellow vegetables, and citrus fruits and tomatoes. Food production was adequate in from one-third to one-half of the families, and preservation of fruits and vegetables was adequate in one-half of the families. In each of the above cases the food practices of the group who had training in home economics were superior to those of the other group.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

THE NEED FOR INSTRUCTION IN INSTITUTIONAL FOOD SERVICE IN THE HIGH SCHOOLS IN GREATER KANSAS CITY. M. B. Miller under direction of B. B. West, Kansas State Coll. (Master's Thesis 1941). On file Kans. State Coll. Library. COMPLETED

Information was obtained from interviews with 60 former Kansas City high school pupils who were employed in food services in greater Kansas City. Each was questioned concerning her home economics training in high school, the conditions under which she was working, and her need for specific training in the area in which she was employed, previous to entering the field as a wage earner. Nineteen managers of commercial food services were also interviewed to obtain their opinions regarding the part the public school might play in training prospective employees. The findings indicated that institutional food service should be added to the curricula of the high schools in greater Kansas City, and that the food service units in this area offer opportunity as pre-apprentice centers for those enrolled in such courses.

THE SCHOOL LUNCH AS A MEANS OF STRENGTHENING HOME ECONOMICS INSTRUCTION. C. Turner under direction of M. V. Campbell, Women's Coll., Univ. N. C. (Master's Thesis 1941). On file Library, Women's Coll., Univ. N. C. COMPLETED

The purpose of this study was to make a list of possible student activities in the lunchroom situation to help teachers to overcome difficulties they encountered in the usual home economics classroom. A selected group of 61 teachers rated a list of specific objectives relating to food and nutrition as to the importance of the objective, the amount of difficulty they encountered in achieving it, and the reason for the difficulty. From this data the writer compiled a list of suggested activities for the use of the school lunch as a means of overcoming some of the difficulties encountered.

A SURVEY OF THE HEALTH KNOWLEDGE OF SENIOR HOME ECONOMICS GIRLS IN KANSAS HIGH SCHOOLS. M. G. Cox under direction of G. G. Hood, Univ. Colo. (Master's Thesis 1941). On file Univ. Colo. Library; Abstract in Univ. Colo. Studies XLI, No. 19. COMPLETED

The study was designed to aid in formulating courses in health. An objective test accompanied by a questionnaire was administered to 418 senior high school girls. Anecdotal records of health practice were included. Findings showed that the high school girl had either not received or retained much health knowledge, although there had been a number of possible sources, chiefly home economics courses, health education in elementary grades, and the home. Ninety-five percent expressed a desire for further training, and there was some evidence of the value of carry over from health knowledge to health habits. Recommendations as to school health programs were made.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

PRESENT SEWING PRACTICES IN THE HOMES OF HIGH-SCHOOL GIRLS IN A PENNSYLVANIA COMMUNITY. H. Wagner under direction of J. D. Amberson, Pa. State Coll. (Master's Thesis 1942). IN PROGRESS

The purpose of the study is to discover if the social status of the home affects the sewing practices in the homes of high school girls enrolled in home economics classes in Catasauqua, Pa. The social status of the homes will be procured by use of the Chapin Social Status Scale as the teacher visits the homes. A diary record of home sewing activities will be kept for a given period of time by the homemakers. Adaptations in the teaching of clothing units in the high school will be made on the basis of the findings.

A STUDY OF OCCUPATIONAL OPPORTUNITIES FOR HIGH SCHOOL GIRLS IN PLAIN DEALING, LOUISIANA. E. W. Steckal under direction of C. Tucker, La. State Univ. (Master's Thesis). IN PROGRESS

The purpose of the study is to determine the need for occupational training due to students leaving school early, to the lack of interest and opportunity for formal education, and to prepare young people to fill vacancies. Data are being secured from former students who had one or more years of Home Economics, concerning types of employment they have secured, how it was secured, remuneration, qualifications of position, and experiences that prepared student for position. Data are being secured by surveying the Plain Dealing Community for the available positions for high school girls.

PLACEMENT OF OUT-OF-SCHOOL SPANISH-AMERICAN GIRLS IN DOMESTIC SERVICE IN PHOENIX, ARIZONA. G. T. Sparks under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

Factors in the course of training which had proven effective in providing stability of placement of out-of-school Spanish American girls in domestic service in Phoenix, Arizona, were investigated.

THE SOCIAL DEVELOPMENT OF THE OUT-OF-SCHOOL GIRLS IN THE ABBEVILLE, LA. NATIONAL YOUTH ADMINISTRATION RESIDENCE. G. T. Carpenter under direction of C. Tucker, La. State Univ. IN PROGRESS

A study was made of the records of experiences planned for the students in the residence center, and techniques for measuring the development of social techniques were developed.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

EDUCATIONAL NEEDS HAVING IMPLICATIONS FOR THE HOME ECONOMICS PROGRAM.
II. OUT OF SCHOOL YOUTH OF AUDUBON, IOWA. E. C. Keith under direction of R. J. Friant, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

This study was an attempt to determine certain educational, vocational, social and recreational problems of the out-of-school youth in the Audubon, Iowa, community. Personal interviews were made with 125 young men and women, 17 to 24 years of age, from farm and village who were no longer in school. As a result of the study, changes in the high school home economics program were recommended so that it might more adequately meet the needs of these youth. Parent cooperation in an educational program was suggested.

EDUCATIONAL NEEDS HAVING IMPLICATIONS FOR THE HOME ECONOMICS PROGRAM:
IV. OUT-OF-SCHOOL YOUNG WOMEN OF OGDEN, IOWA. Z. H. Butterfield under direction of P. Nickell and M. S. Lyle, Iowa State Coll. (Master's Thesis 1941). (Part of larger project, A Field Study of Adult Education in Homemaking). On file Iowa State Coll. Library. Reported in Notes on Research No. 6, p. 224, 1941. COMPLETED

Through a study of the interests, activities and problems which concern the young women 16-25 years of age living in this community certain needs which should be met in an adult education program were discovered. By personal interview 87 young women, 50 single and 37 married, were contacted. Recommendations were made for curriculum and administration to help them with the problems of finances, further education, personal attractiveness, participation in satisfying social life, and others which concerned them greatly. A method of curriculum planning as well as a portrayal of conditions in a midwestern rural community are provided.

EDUCATIONAL NEEDS HAVING IMPLICATIONS FOR THE HOME ECONOMICS PROGRAM:
V. IN THE AREA OF PERSONAL LIVING OF NINTH GRADE GIRLS, KIRKSVILLE, MISSOURI. L. P. Buckingham under direction of M. Pattison, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

This study is being made to determine what information is significant for discovering the needs of ninth grade girls in the area of personal living as a basis for planning classroom experiences. A schedule based on a classification of developmental needs of adolescents, is being used for recording data. These data are being secured from school records; interviews with students, their mothers and home room teachers; and observations by the investigator and other teachers.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

EDUCATIONAL NEEDS HAVING IMPLICATIONS FOR THE HOME ECONOMICS PROGRAM.

VI. RECREATIONAL ACTIVITIES OF HIGH SCHOOL GIRLS IN NEWTON, IOWA.

M. D. Hagen under direction of M. Pattison, Iowa State Coll. (Master's Thesis).
IN PROGRESS

The purpose of this study is to determine the adequacy of recreational facilities and participation for meeting the development needs of ninth grade girls in Newton, Iowa. Interviews with community leaders, pupils and their parents will supplement data secured on a questionnaire. Recommendations will be made for the home economics curriculum in this school.

A STUDY OF COMMUNITY SURVEY SUMMARIES IN SEVENTY-FOUR COMMUNITIES IN NORTH CAROLINA FOR THE THREE YEAR PERIOD 1936-38. V. L. Ward under direction of D. Kent, Univ. Tenn. (Master's Thesis 1941). On file Univ. Tenn. Library.
COMPLETED

The study was made for the purpose of determining the usefulness of the survey data and its educational implications. The study revealed a need for improvement in the physical equipment and management of resources of the families. There was great variation in size of families, types of houses and activities of people. The needs of the individual were lost through summarization of information. It would seem that individual blanks are more important than a summary representing local conditions or the state as a whole. The survey revealed information as to conditions but did not enlighten one as to why they existed.

COMMUNITY EXPERIENCE. D. D. Scott, Ohio State Univ. (Professional). (Part of larger project, Guidance-Research Program). Published in Jour. Home Econ. 34 (1942), pp. 169-173.
COMPLETED

A report of an experimental project in providing pre-student teaching experience in a high school community, for prospective home economics teachers. Over a three year period about fifty college students, ranging in rank from sophomore to senior have worked and observed voluntarily in selected communities, and their experience has been evaluated. Evaluation procedures have shown that student attitudes and understandings regarding high school pupils and high school teaching have been influenced by the experience, and that administrators and home economics teachers in the cooperating schools consider it a most worthwhile project.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

IMPROVEMENTS NEEDED IN THE PREPARATION OF ADULT HOMEMAKING TEACHERS FOR MISSISSIPPI VOCATIONAL DEPARTMENTS AS EVIDENCED BY ANALYSIS OF PROBLEMS TEACHERS ENCOUNTER IN SERVICE. M. L. Stoker under direction of M. S. Lyle, Iowa State Coll. (Master's Thesis 1941). On file Iowa State Coll. Library. COMPLETED

To discover some of the improvements needed in the preparation and in-service guidance of teachers of adult homemaking classes in Mississippi, an analysis was made of the problems reported by 35 of the 36 adult homemaking teachers employed in 1940-41. A problem check list, personal interviews with teachers and 31 superintendents who supervised their work, and reports of two itinerant teacher trainers upon the work of 27 teachers were employed to furnish material for the analysis. Specific recommendations were made for problems needing more attention during the pre-service training and during in-service guidance and for ways to start needed improvements.

THE LIVING CONDITIONS OF NEGRO FAMILIES IN CHOCTAW COUNTY, HUGO, OKLAHOMA. E. Hall under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

To determine how the home economics course at Booker T. Washington High School could be modified to help the Negro girls of Choctaw County improve their living conditions.

HOUSING CONDITIONS IN HANCOCK COUNTY, GEORGIA. L. Lowe under direction of E. Todd, Univ. Georgia (Master's Thesis 1941). On file Univ. of Georgia Library. COMPLETED

The purpose of this study was to discover conditions of farm home housing in a Georgia county and to suggest their implications for education in that county. The investigator formulated minimum standards for judging farm home housing, selected one hundred representative homes in the county and compared the conditions of the houses with the standards formulated. The findings indicated that the houses did not meet the standards but more nearly reached the physiological requirements than the psychological, sanitary or safety requirements. The study is significant in that it presents minimum standards for farm home housing and indicates a practical technique for judging such housing.

READING PRACTICES OF MARRIED ADULT HOMEMAKERS. V. B. Strauch under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

The purpose of the study was to investigate the reading practices of married adult homemakers who attended homemaking classes.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

A SURVEY OF THE DUTIES AND RESPONSIBILITIES OF HOUSEHOLD EMPLOYEES IN NEW MEXICO AS A BASIS FOR CONTENT IN HOME ECONOMICS COURSES.

A. L. Koehler under direction of G. G. Hood, Univ. Colo. (Master's Thesis 1941). Abstracted in Univ. Colo. Studies, XLI, No. 19. On file/Univ. Colo. Library. COMPLETED

The study was made for the purpose of determining the needs for training household employees. It was based on data received from 111 questionnaires checked by employing housewives and on information received in interviews with employees. Great lack of standardization of conditions of work was found; and employers as well as employees are in need of training. Recommendations are made that homemaking classes stress training both employees and potential employers, that training in personal relationships with changed attitudes toward employment as well as skills and techniques are needed. Placement and follow up work should accompany training programs.

A STUDY OF THE HOMEMAKING EDUCATIONAL ACTIVITIES OF ADULTS AND OUT-OF-SCHOOL YOUTH IN ONE COMMUNITY. K. Duroe under direction of G. M. Henderson, N. Y. Coll. Home Econ., Cornell Univ. (Master's Thesis 1943). IN PROGRESS

A service study is being made for a community in which representatives of several interested agencies are anticipating some cooperative planning of a community-wide program of homemaking education.

AN INTERPRETATION OF THE PURPOSES AND FUNCTIONING OF HOUSEHOLD SERVICE TRAINING FOR N. Y. A. EMPLOYEES IN SEATTLE. R. L. Redmond under direction of A. Haley, Univ. Wash. (Master's Thesis 1941). On file Univ. Wash. Library. COMPLETED

This study was undertaken to determine the need and efficiency of the Household Service Training in Seattle. Data were secured from files of the Seattle office, interviews with several placement offices, study of previous surveys, and the 1930 census. It was revealed that there is a need for a training course in household services in Seattle to supply trained workers for the very open labor market in that field and to help raise the standards of employment in an occupation. The training course as now organized meets the need in that it provides practical, intensive training specifically for household service in phases of work which correspond to the duties expected of employees by household employers, it trains individuals who qualify for placement in terms of age, health, and ability; and it influences standards of employment by the selective placement of the limited number of trained workers.

HOME ECONOMICS EDUCATION

Needs and practices (Continued)

CRAFTS IN HOME ECONOMICS AS ONE MEANS OF CONSTRUCTIVE RECREATION. M. K. Pfau under direction of A. D. Pressey, Ohio State Univ. (Master's Thesis 1941). On file Ohio State Univ. Library.

COMPLETED

The procedure included a review of reports of research dealing with leisure time activities for varied groups, the noting of the investigator's suggestions, the searching out of material dealing with various leisure time programs and the contributions of handicrafts. This was followed by contacting and interviewing a number of people engaged in craft work, by visiting handicraft classes and by reviewing a number of books, pamphlets and catalogues. Conclusions are that people need help in finding constructive recreation; that crafts yield real satisfaction; that they can be taught by the home economics teacher and will increase the interest in her program.

Attitudes and interests

THE USE OF THE JUNIOR HOMEMAKERS ORGANIZATION AS A MEANS OF DEVELOPING CERTAIN BEHAVIOR. R. Batchelor under direction of C. Tucker, La. State Univ. (Master's Thesis).

IN PROGRESS

To study changes in pupil behavior as a result of certain planned experiences in the Junior Homemaker Clubs. Selected behaviors are being measured before and after students have had certain experiences. Methods of measuring the selected traits chosen for this study are being developed.

SOME FACTORS WHICH AFFECT THE ACCEPTANCE OF RESPONSIBILITY BY 11 AND 12 YEAR OLD CHILDREN. A. McGurk under direction of A. Long, Purdue Univ. (Master's Thesis 1942). (Part of larger project, Study of Home Activities of Children).

IN PROGRESS

To find some relationships between parental attitudes, type of home, economics and occupational pattern, and intelligence of child in the acceptance of responsibilities in and about the home, a large number of statements of children relative to their beliefs, relative to their responsibilities in and about the home have been analyzed. From these, a limited number of cases have been selected for personal interviews with the child, teachers and parents.

AN ANALYSIS OF THE ACTIVITIES AND INTERESTS OF A SELECTED GROUP OF HIGH SCHOOL GIRLS DURING SUMMER VACATION. K. Bollenbach under direction of L. M. Welch, Univ. Okla. (Master's Thesis 1942)

IN PROGRESS

As a basis for improving the extended vocational homemaking program, the activities and interests during summer vacation of a selected group of high school girls are being determined by means of diaries and interviews. On the basis of the findings the investigator will make recommendations for an extended program and will describe a typical week for a pupil who may be enrolled.

HOME ECONOMICS EDUCATION

Attitudes and interests (Continued)

DEVELOPING AND MAINTAINING STUDENT INTEREST IN LEARNING THROUGH A STUDY OF THE SELECTION, COST, CONSTRUCTION, AND CARE OF CLOTHING. T. H. Harrill under direction of M. V. Campbell, Woman's College, Univ. of N. C. (Master's Thesis 1941). On file Library, Woman's College, Univ. of N. C. COMPLETED

Pupil behavior indicating a lack of interest in learning as observed in home economics classes was analyzed to find the causes of lack of interest. With these causes in mind, a survey was made of literature in home economics education to find suggestions for developing and maintaining interest in learning. Six of these suggestions were used by the writer in a study of the selection, cost, care, and construction of clothing. The study revealed that where there was pupil interest in learning already, it was maintained. Interest in learning was developed in other cases. But the writer feels that there are pupils who need competent guidance in finding, developing and enriching their interest.

LEISURE TIME ACTIVITIES OF GIRLS ENROLLED IN HOME ECONOMICS IN THE HIGH SCHOOLS OF NATCHITOCHES PARISH. M. K. Brunen under direction of H. Baker, La. State Univ. (Master's Thesis 1941). On file La. State Univ. Library. COMPLETED

The study was based upon a review of leisure time activities of girls enrolled in the home economics departments of fifteen high schools in Natchitoches Parish, Louisiana. Analysis of data secured from questionnaires and personal conferences with the principals and home economics teachers were the methods of procedure. The majority of the girls were daughters of farmers and public workers. Leisure time was divided among church activities, Home Economics Clubs and other school organizations, active sports, reading, listening to the radio, flower gardening, and a minimum percentage of other activities. It was found that non-participation in desirable activities was due to lack of time, money, and training. These facts seemed to indicate that there was ample opportunity for home economics to function in guiding students with their leisure time.

THE HOME ACTIVITIES OF A SELECTED GROUP OF NEGRO HIGH SCHOOL GIRLS IN ARKANSAS. C. H. Coleman under direction of L. Rust, Kansas State Coll. (Master's Thesis 1941). On file Kansas State Coll. Library. COMPLETED

One hundred and seventy check lists from nine rural and small town high schools were studied to ascertain the home activities of Negro girls as an aid to planning home economics programs for these Arkansas high schools. The study showed the girls came from low income families, having low health standards and facilities. They had many home responsibilities with improvement in standard of performance of these duties needed. Help was needed in buying and in use of leisure. The need was evidenced for a broad program of homemaking suitable for Negro families and experiences which would help girls to make better use of resources and to improve home and family life.

Attitudes and interests (Continued)

LEISURE ACTIVITIES OF CERTAIN NEGRO HIGH SCHOOL GIRLS OF SOUTHERN MISSOURI. A. F. White under direction of L. Rust, Kansas State Coll. (Master's Thesis 1941). On file Kansas State Coll. Library.

COMPLETED

Check lists from 151 high school girls in 4 Negro high schools showed the girls had significant amounts of time for leisure but made poor use of it. No planning for leisure was done by families and little provision made by schools and communities. The study suggested that instruction in the high school should help students select and evaluate leisure activities and should foster those in which individuals participate. In the ninth grade, particularly, units on leisure should be included in the curriculum. The school, church, and community should help the homes provide for better use of leisure by high school students.

ATTITUDES OF HIGH SCHOOL PUPILS TOWARD FAMILY RELATIONSHIPS. Z. A. Kibler under direction of E. Todd, Univ. Georgia (Master's Thesis 1941). On file Library, Univ. Georgia.

COMPLETED

The major purpose of this study was to discover the attitudes of high school boys and girls toward major issues in family relationships. The investigator prepared a testing device composed of 56 pairs of statements representing pupils' opinions toward five major issues, each pair of statements presenting opposing points of view, one desirable and the other undesirable. The test was given to 332 eleventh grade boys and girls. Pupils' responses were about 80 percent desirable, 10 percent undesirable and 10 percent uncertain. The study is valuable in that it presents an objective device for discovering pupil attitudes toward family relationships and reveals needed changes in emphasis in teaching family relationships.

LEISURE TIME ACTIVITIES OF HIGH SCHOOL GIRLS. R. M. Proctor under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941).

COMPLETED

The investigation determined to what extent the leisure time activities of the girls of Douglas County High School, Castle Rock, Colorado, met the leisure time and social requirements of high school girls in general.

OCCUPATIONAL INTERESTS OF 4-H CLUB GIRLS OF BAYLOR COUNTY, TEXAS. F. Johnson under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941).

COMPLETED

An investigation of how the value of 4-H club work could be increased for the girls in helping to prepare them for the occupations in which they might be engaged.

HOME ECONOMICS EDUCATION

Attitudes and interests (Continued)

AN INVESTIGATION OF HOME ECONOMICS PROGRAM PREFERENCES AMONG URBAN AND RURAL HOMEMAKERS IN THE LISTENING AREA OF RADIO STATION K.W.S.C. E. Roberts under direction of A. M. Stevenson, State Coll. of Wash. (Master's Thesis). IN PROGRESS

This investigation is to study listener reactions in order to determine where stress should be placed in future broadcasts from Radio Station K.W.S.C. Check sheets will be used to secure information on homemaker's subject matter preferences, types of program presentation most enjoyed, average volume of listening to homemaking programs, and times of day most suitable for listening to homemaking information.

CERTAIN FACTORS INFLUENCING SENIORS IN HOME ECONOMICS AT IOWA STATE COLLEGE IN THEIR CHOICE OF A PROFESSION. E. J. Lee under direction of H. Chadderdon, Iowa State Coll. (Master's Thesis 1941) (Part of larger project, Factors Affecting the Supply and Demand of Home Economics Teachers in Iowa). On file Library, Iowa State Coll. Reported in Notes on Research No. 6, p. 224, 1941. COMPLETED

Methods

AN EXPERIMENTAL STUDY IN THE USE OF A MOVING PICTURE IN TEACHING FIRST SEWING TECHNIQUES TO SEVENTH GRADE GIRLS. E. Moyer under direction of A. M. Stevenson, State Coll. of Wash. (Master's Thesis 1942). On file State Coll. of Wash. Reported in Notes on Research No. 6, p. 230, 1941. COMPLETED

The purpose of this study was to determine if there was a saving of time and greater ease in learning the techniques of first sewing as the result of the use of a moving picture. A moving picture was developed, and two groups were equated on the basis of intelligence, past experience, and performance. Data in terms of achievement and the time required to reach accepted standards were treated statistically. The results indicated that both groups acquired the techniques about equally well, but the experimental group made a significant gain in the quality of its work, and in the time required to use the techniques.

TEACHING DEMOCRATIC LIVING THROUGH THE HOMEMAKING PROGRAM. A. Gibson under direction of L. M. Welch, Univ. Okla. (Master's Thesis 1941). Reported in Notes on Research No. 6, p. 232, 1941. COMPLETED

As a means of determining the possibilities of developing democratic ideals and practices through conscious effort on the part of the home-making teacher, the progress of nine girls was carefully checked over a period of six months. Case histories, ratings of character traits and tests were used at the beginning. Opportunities to learn democratic ways were made, and activities as well as anecdotal records were kept. At the end of the period the same tests were given again. In addition the pupils solved true-to-life problems. There was adequate evidence of satisfactory growth in democratic living.

HOME ECONOMICS EDUCATION

Methods (Continued)

A STUDY OF THE EFFECTIVENESS OF TEACHING METHODS USED IN A COLLEGE COURSE IN FOOD SELECTION AND PREPARATION. E. L. Howell under direction of M. V. Campbell, Woman's Coll., Univ. N. C. (Master's Thesis 1941). On file Library, Woman's Coll., Univ. of N. C. COMPLETED

The purpose of the study was to measure knowledge in various subject matter areas and to measure the ability of the student to apply knowledge to the solution of problems met at a subsequent date. Objectives for the course were set up and a testing program inaugurated. Analyses of results of the measurement program show that there is not a significant difference in achievement in subject matter areas, but in all situations in which the students were tested either formally or observed, there is evidence of the students inability to apply knowledge. Therefore a method of attack which will give the student more activities and experiences in applying knowledge is recommended.

DISTRIBUTION OF STUDENT USE OF TIME IN THE FOOD PREPARATION LABORATORIES. M. Miller under direction of H. Chadderdon and P. M. Nelson, Iowa State Coll. (Master's Thesis 1941). Reported in Notes on Research No. 6, p. 217, 1941. COMPLETED

One thousand four hundred and forty-seven individual records of student use of time in food preparation laboratories were analyzed for mean distribution of time used in each activity and mean distributions of the entire group. The total mean distributions were used as the norm with which the separate classes were compared. Ten percent of the laboratory time was used for assignments, 2.0 percent for reading directions, 6.7 for getting supplies, 37.1 for preparing products, 15.8 for washing dishes, and 26.6 percent for discussing results, 2 percent of the period unaccounted for. The students' use of the lab. time, their achievements as measured by the teacher's subjective grade, and their grades from objective examinations were studied. Both subjective and objective grades were converted to grade points for comparisons. Great variation was found among the classes, the teacher's use of time for assignments, the time used for food preparation, for discussion, and between use of time and the examination grade points.

HOME ECONOMICS EDUCATION

Methods (Continued)

SUGGESTIONS FOR IMPROVING THE PREPARATION OF HOMEMAKING TEACHERS. L. O'Toole under direction of M. Pearson, Okla. A. & M. Coll. (Master's Thesis). Reported in Notes on Research No. 6, p. 234, 1941.

COMPLETED

Purposes of this study were to gain information concerning teaching procedures used by graduates of the school of Home Economics of Oklahoma Agricultural and Mechanical College. Conclusions reached were based upon answers made by students enrolled in homemaking, teachers of homemaking, and superintendents to questionnaires. Results show that recent graduates are providing democratic learning situations for their students. Beginning teachers have a better conception of present day educational philosophy and democratic methods of teaching than do experienced teachers. Students and teachers prefer democratic learning situations and show by their statements that they are striving to carry out an educational philosophy based upon the democratic ideal. Facts obtained in this study imply a need for continued emphasis upon democratic learning experiences in all teacher education courses, a need for a more functional teacher education program in the college, for an in-service training program promoted by the college in cooperation with the state department of Home Economics Education, and improved local conditions on the part of secondary schools. It would seem that the teacher training institution should re-evaluate all courses offered in the light of our effectiveness in the preparation of teachers.

TEACHING PROCEDURES OF SIXTEEN HOME ECONOMICS TEACHERS, GRADUATES OF TEXAS STATE COLLEGE FOR WOMEN. L. Stephens under direction of R. J. Friant, Iowa State Coll. (Master's Thesis 1942).

IN PROGRESS

Data relating to teaching procedures of sixteen homemaking teachers in two off-campus training centers of Texas State College for Women are being secured through interviews with the teachers, six pupils, six mothers, the principal or superintendent of each school and the area supervisor. The procedures being studied are (1) ways and means of determining pupil's needs (2) ways and means of adjusting to these needs and (3) management of the department. These procedures will be evaluated by criteria for democratic practices. Recommendations for pre-service education of teachers will be made.

ILLUSTRATIVE MATERIAL RELATING TO THE PRINCIPLES OF LINE IN DRESS DESIGN. E. Hensen under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941).

COMPLETED

The study was made to determine how the principles of line could be illustrated for teaching specific problems in dress design.

HOME ECONOMICS EDUCATION

Methods (Continued)

A STUDY OF THE CLINIC METHOD OF TEACHING CLOTHING IN BEGINNING LABORATORY CLASSES AT WASHINGTON STATE COLLEGE. F. L. Smith under direction of A. M. Stevenson, State Coll. of Wash. (Master's Thesis). Reported in Notes on Research No. 6, p. 238, 1941. IN PROGRESS

The purpose of the study is to evaluate the clinical method of teaching elementary laboratory clothing classes. Two sections are matched and the clinic method is used with one section as a possible means of better meeting the individual needs of the girls. A comparison will be made on the basis of written tests, anecdotal records, check sheets, and garments made.

SUPERVISION. F. Champion under direction of L. Mitchell, Univ. Tenn. (Master's Thesis). COMPLETED

A Supervisor observed regularly selected student teachers using a variety of means for obtaining information on the work the high school students were doing and the ways in which the teachers worked with them. Visits were followed by conferences with the teacher. These conferences seemed helpful to the extent that the supervisor understood the interests of the high school students, the objectives of the teacher and to the extent that she could gain fairly accurate knowledge as to the work previously done by both; careful statement of objectives by both teachers and students and records of work done was recommended.

BASIC CONSIDERATIONS OF A PROGRAM OF EDUCATION FOR MARRIAGE. M. A. Greenberg, under direction of M. M. Thompson, Univ. So. Calif. (Master's Thesis 1941). On file Univ. So. Calif. Library. COMPLETED

It was the purpose of this study to collect recent findings pertaining to marital adjustment as reported in studies of marital adjustment and determine their significance for education. Research disclosed that women first demand equality; that the wife's sexual inadequacy and inequality of sexual drives are primary sources of marital discord; that family setting conditions personality, and that there is a positive correlation between maladjusted individuals, and those having sexual difficulties in marriage. Education for marriage should begin early; it should evolve around a program of mental hygiene. Sex education is the responsibility of the school as well as of the home.

HOME ECONOMICS EDUCATION

Methods (Continued)

A STUDY OF SUPERVISION AS APPLIED TO SUPERVISION. F. Champion under direction of L. Mitchell, Univ. Tenn. (Master's Thesis). COMPLETED

A Supervisor observed regularly selected student teachers using a variety of means for obtaining information on the work the high school students were doing and the ways in which the teachers worked with these students. Visits were followed by conferences with teacher. These conferences seemed helpful to the extent that the supervisor understood the interests of the high school students, the objectives of the teacher and to the extent that she could gain fairly accurate knowledge as to the work previously done by both. Careful statement of objectives by both students and teachers and records of work done was recommended.

A STUDY OF TENSIONS AFFECTING THE DEVELOPMENT OF STUDENT TEACHERS. J. O. Parvis under direction of M. G. McFarland, Purdue Univ. (Master's Thesis).
IN PROGRESS

The purpose of this study is to determine some factors which contribute to the accumulation or release of tense behavior of student teachers in home economics and to determine what relationship two methods of supervision may have to these contributing factors. A list of evidences of tension was compiled and checked by the supervisors and supervisory teachers of home economics in four institutions. Student teachers in the institutions checked lists of possible causes of tension at the beginning and at the end of their student teaching period. Two types of supervisory procedures are being used for the purpose of determining possible means of relieving tense student teaching situations.

Evaluation

SUGGESTIONS FOR A DEMOCRATIC APPROACH TO EVALUATION IN HOMEMAKING EDUCATION. V. Onley under direction of J. Christian, Tex. State Coll. for Women (Master's Thesis 1941). On file Tex. State Coll. for Women Library.
COMPLETED

The writer attempted 1) to give an interpretation of the values involved in democratic living together with their implications for homemaking education; 2) the specific implication of these for evaluation; and 3) to discuss technique for evaluating homemaking education and some specific examples. It was assumed that education should proceed in terms of values and that evaluation should be aimed at determining what values the student holds. The techniques used were directed at determining 1) attitudes toward certain social problems affecting families;*3) ability to distinguish between facts and assumptions. The author concluded that 1) teacher and pupil should participate in determining evaluation results and 2) that all evaluation should proceed in terms of the democratic ideal.

*2) ability to interpret data;

HOME ECONOMICS EDUCATION

Evaluation (Continued)

AN EXPLORATORY STUDY OF THE DIFFICULTIES ENCOUNTERED BY A SELECTED GROUP OF STUDENT TEACHERS. W. Johnson under direction of D. C. Kent, Univ. Tenn. (Master's Thesis 1941). On file Univ. Tenn. Library.
COMPLETED

This is a study of factors contributing to difficulties encountered by student teachers. Case studies of twelve student teachers were compiled. Findings indicated that those who had unusual difficulty in making desirable adjustments tended to be those who had ranked as average for personal qualities and abilities, as in scholastic ratings, had earned part of their way through school, were transfer students, and whose greatest interests were in areas other than home economics. It was recommended that all available information concerning students be analyzed at the beginning of their experience in student teaching and that special attention be given to those who fall into the groups described above for the purpose of guiding them in making more successful adjustments.

EVALUATION AS A MEANS OF DETERMINING THE CONTENT AND PROCEDURES FOR TEACHING FOODS AND NUTRITION. J. Alexander under direction of L. M. Welch, Univ. Okla. (Master's Thesis 1942).
IN PROGRESS

Through the use of various evaluating procedures in a twelve weeks unit in foods and nutrition, the investigator expects to show some values of continuous appraisal as a means of improving procedures and the selection of content.

CRITERIA FOR THE SELECTION AND USE OF EDUCATIONAL FILMS FOR TEACHING RELATIONSHIPS. R. G. Spencer under direction of L. M. Welch, Univ. Okla. (Master's Thesis 1942).
IN PROGRESS

Through an examination of recent literature and by means of interviews with visual education authorities, criteria for the selection and use of educational films for teaching family and community relationships are being set up. The investigator together with a number of experienced teachers will use these criteria to evaluate available educational films on family and community relationships subjects.

AN EXPERIMENTAL APPROACH TO EVALUATION IN AREAS OF HOME ECONOMICS AT THE HIGH SCHOOL LEVEL. A. Long, in coop. with supervisory staff, Home Econ. Education, State of Indiana (Professional). Probable date of completion of one part (Home Care of the Sick) Sept. 1942. IN PROGRESS

The purpose of the study is to test the possibility of increasing the amount of learning which may take place in various areas of home economics education at the high school level by: (1) organizing the subject matter into meaningful experiences relating to every day life problem, (2) suggesting activities for pupils' participation, (3) suggesting formal and informal ways to measure the progress of the pupils. Some thirty departments of home economics in various parts of the state are being selected for the experiment, fifteen of which will serve as a control group.

Evaluation (Continued)

GROWTH MADE BY A GROUP OF GIRLS IN APPRECIATION OF BEAUTY IN SURROUNDINGS AND HUMAN RELATIONSHIPS. M. M. Rhyne under direction of M. V. Campbell, Women's Coll., Univ. of N. C. (Master's Thesis 1941). On file Library, Woman's Coll., Univ. of N. C. COMPLETED

The development of the individual's appreciation of beauty in environment and human relationships was measured by pencil and paper tests and by analysis of anecdotal records. An effort was made to provide material beauty in cottages where these orphanage girls lived and in the home economics apartment. The fact that gains were made in knowledge and ability to apply knowledge, as was indicated by results of the tests, was of some moment; but the joy shown by living in improved surroundings was even more significant. The writer points out the fact that the eighth grade girls made more progress than the seniors in appreciation of beauty as evidenced by favorable changes in behavior and the eighth grade girls who lived in "twenty-four-hour" rooms excelled those who lived in the usual living arrangements.

A STUDY OF THE VIEWPOINTS EXPRESSED BY SHELBYVILLE HIGH SCHOOL GRADUATES TOWARD HOME ECONOMICS INSTRUCTION AND USED AS A BASIS FOR THE REVISION OF THE HIGH SCHOOL COURSES. H. S. Newport under direction of M. L. Matthews, Purdue Univ. (Master's Thesis 1941). On file Purdue Univ. Lib. COMPLETED

This study was made to determine the adequacy of the Home Economics curriculum offered in the Shelbyville (Indiana) high school. Alumnae from 1930-40 were asked to express their opinions on questionnaires sent to them. A suggestion made by a large percentage of the alumnae was that a course in General Home Economics be required of every girl graduating from the high school. The suggested units to be included in this course were Home Nursing, Home Management, Foods, Consumer Education and Child Development. Further suggestions made by the alumnae were that the clothing courses be changed so that more time could be spent on selection and less on construction and that more time be spent on the selection and service of meals. The study indicated that training for a Home Economics vocation as well as for home-making was desirable since many of the graduates worked in specialized fields requiring such training.

EFFECTIVENESS OF A COURSE IN PERSONAL-SOCIAL LIVING FOR TEACHING HIGH SCHOOL SENIORS TO APPLY PRINCIPLES IN PERSONAL AND SOCIAL RELATIONS. S. A. Brown under direction of H. Chadderdon and M. Pattison, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

The study is based upon the assumption that general objectives for a course in personal social living for twelfth grade students should be based upon an interpretation of needs as revealed by studies and cumulative records of previous classes. The purpose here is to measure by a test prepared by the investigation growth toward one of these objectives --ability to apply principles of relationships. A pretest and final test will be given to class members and a control group.

HOME ECONOMICS EDUCATION

Evaluation (Continued)

AN EVALUATION OF THE EFFECTIVENESS OF A STUDENT-TEACHING PROGRAM WITH A SELECTED GROUP OF HIGH SCHOOL PUPILS. M. Schell under direction of J. Christian, Tex. State Coll. for Women (Master's Thesis 1942).

IN PROGRESS

The purpose of this investigation is to study present procedures used in a junior and a senior high school class in terms of the democratic philosophy which they reveal. To determine values to which students adhere and their ability to do reflective thinking, class observations will be made, anecdotal records kept, personal conferences held and paper and pencil test given. Recommendations for changes in teacher education at Texas State College for Women will be based upon these findings.

THE VALUE OF PARENT-PUPIL-TEACHER PLANNING IN A FUNCTIONING HIGH SCHOOL HOMEMAKING PROGRAM. L. Hickman under direction of H. Schaefer, Univ. Okla. (Master's Thesis 1942).

IN PROGRESS

Meetings are being held with the parents and students of the investigator's homemaking classes. Suggestions for the improvement of these classes are made by both groups. Records are being kept of reactions to the meetings, and attendance, participation, suggestions, needs, and satisfactions are checked.

ATTITUDES TOWARD HOMEMAKING II. CHANGE IN ATTITUDES OF SENIOR COLLEGE WOMEN TOWARD HOMEMAKING AFTER COMPLETION OF CERTAIN UNITS IN HOME MANAGEMENT COURSES. E. Powers under direction of H.V. Gaskill and P. Nickell, Iowa State Coll. (Master's Thesis 1941). (Part of larger project, Study of Attitude Measurement). On file Iowa State Coll.

COMPLETED

A scale of one hundred statements taken from 'Zwemers' scale for measuring attitudes toward homemaking was given to seniors in home economics before living in a home management house or taking a discussion course in homemaking. After having completed one of the preceding courses and after having completed both courses, statistical methods were used to analyze the data. It was found that the general courses in home management at Iowa State College influenced the attitudes of the senior women taking Home Economics toward certain phases of homemaking. Most change occurred toward food preparation, accounting, family spending and care of children. Only slight differences were found in the change in attitude by students who took the home management courses in a different order. The change in attitude found was mainly in degree of response, that is from agreement to hearty argument and disagreement to hearty disagreement or vice versa.

Evaluation (Continued)

ATTITUDINAL CHANGE OF STUDENTS TOWARD HOMEMAKING AFTER COMPLETION OF CERTAIN UNITS IN HOME MANAGEMENT AS RELATED TO CERTAIN FACTORS, III: APTITUDE TEST SCORES, ALL-COLLEGE AVERAGE CHOICE OF VOCATIONAL INTEREST, SIZE OF FAMILY, AND LOCATION OF HOME. E. Martin under direction of H. V. Gaskill and P. Nickell, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

The data which will be used in this study were collected for two previous studies. An attitude scale was developed in the first of the studies by Zwemer^o and later given to College Seniors by Powers.

^oGaskill, H., Nickell, P., and Zwemer, E. The measurement of change of attitudes toward some phases of homemaking. Jour. Home Econ. 32:173-180. 1940.

AN APPRAISAL OF A CONSUMER EDUCATION PROJECT RELATING TO FOOD EXPENDITURES. H. M. Kory. D. M. Lewis, New York Univ., adviser (Doctor's Thesis 1942). IN PROGRESS

The purpose of this study was to determine whether education relating to food purchasing conducted in college home economics classes encourages students to improve their food spending practices. The nutritive value and cost of foods purchased for families of the above-mentioned students are being compared with foods purchased for families of a group of college students not included in the consumer education project. Improvements are judged by gross weight method of checking; by proportional expenditure method; by comparison with distributions, advocated by authorities.. Statistical methods of comparison are employed. A definite relationship seems to exist between religion, food purchasing habits, and degree of improvement achieved. Liberal quantities of citrus fruits are purchased; too little is spent for green leafy vegetables, milk, and milk products; too much for meat, fish, and poultry.

THE ADEQUACY OF SOURCE MATERIALS FOR TEACHER-USE IN ADULT HOMEMAKING CLASSES AS EVALUATED BY TEACHERS. J. Kilpatrick under direction of M. S. Lyle, Iowa State Coll. (Master's Thesis 1942). IN PROGRESS

The purpose of this study is to secure the teachers' evaluation of the adequacy of materials available for preparing lessons for adult classes. Proposals for ways to increase the adequacy of these materials, if such is found necessary, are to be made. Questionnaires and evaluation sheets are being used to secure data from all teachers in Iowa who receive federal reimbursement for their adult classes. Information needed by the State Supervisor and the Teacher Training Institution should be discovered.

AN ANALYSIS OF THE FOOD COSTS FOR A FOOD- PREPARATION COURSE AS TAUGHT TO ADULT HOMEMAKING GROUPS AT A PRIVATE SCHOOL. T. M. Weber, Univ. Chicago (Master's Thesis 1941) COMPLETED

A study of the cost and an evaluation of the methods used in teaching a course in food preparation organized on the meal-combination, time-management basis, as taught in a private school catering to well-to-do homemaking groups.

HOME ECONOMICS EDUCATION

Evaluation (Continued)

AN EVALUATIVE SURVEY OF THE NUTRITION IN DEFENSE PROGRAM OF SPOKANE CITY AND COUNTY. H. Thackeray under direction of A. M. Stevenson, State Coll. of Wash. (Master's Thesis). IN PROGRESS

Nutrition for Defense Programs has been organized to aid the present national emergency. It is hoped that a check on the scope and effectiveness of the work in Spokane City and County will serve as a guide to modifying and improving the present organization and will offer suggestions to other counties for evaluating their work. Data will be gathered by means of interviews and two check sheets - one for leaders and one for participants.

A STUDY OF INSTRUCTION IN RELATION TO DIETARY HABITS AND NUTRITIONAL STATUS OF RURAL FAMILIES. R. E. Crossen under direction of J. M. Smith and P. B. Mack, Pa. State Coll. (Master's Thesis 1941). COMPLETED

Food records were kept for twenty-four rural families, the members of which were then tested for nutritional status by the usual Pennsylvania series of techniques. The families were then given conferences concerning their responses to the tests, with recommendations concerning alteration of their dietary habits. After a lapse of six months, diet records were kept a second time with a second battery of tests. Significant improvements were found in many responses, in comparison to the matched control samples.

History and status

A STUDY OF HOME REMEDIES USED BY A SELECTED GROUP OF GEORGETOWN, TEXAS, FAMILIES. R. Thorp under direction of E. S. Eppright, Tex. State Coll. for Women (Master's Thesis 1941). On file Home Economics Office, Tex. State Coll. for Women, Denton. COMPLETED

With the idea of securing a better foundation for the teaching of Home Hygiene and Care of the Sick in high school, a study was made of the home remedies used by 35 families of Georgetown, Texas. The remedies as reported for various disorders were compared with the recommendations made by the Red Cross. A surprising prevalence of superstitions and actually harmful practices was observed.

HOME ECONOMICS EDUCATION

History and status (Continued)

VARIATIONS IN HOME LIFE AND ACTIVITIES OF GIRLS STUDYING VOCATIONAL HOME ECONOMICS. E. M. Roth under direction of E. Robb, Temple Univ. (Master's Thesis 1941). On file Sullivan Memorial Library. COMPLETED

The study was planned to discover the variations in home life and activities of the girls in the Home Economics course at Murrell Dobbins Vocational School in Philadelphia. Parents of the girls were interviewed concerning housekeeping routines, dietary habits, participation in food preparation, activities related to clothing, marketing practices and wage earning activities. Results showed that the girls took too little participation in housekeeping activities; that the diets were below accepted standards, and that the nutrition training of the girls was not reflected in the family diet. More supervised home practice in meal planning, more emphasis on good dietary habits and more training in clothing selecting and marketing was recommended.

OCCUPATION AND EDUCATIONAL STATUS OF OUT-OF-SCHOOL GIRLS IN THE SAN JUAN BASIN, COLORADO. M. Brown under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

An investigation was made to determine whether the occupations and educational status of the out-of-school girls between the ages of 16 and 21 in the San Juan Basin of Colorado showed a need for some type of homemaking instruction.

DEVELOPMENT OF HOMEMAKING IN THE HIGH SCHOOLS FOR COLORED STUDENTS IN OKLAHOMA. Z. J. Black under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

A study to determine the progress of homemaking departments for colored students in high schools in Oklahoma during the period 1918-to 1939.

HISTORY OF HOME ECONOMICS COURSES FOR BOYS IN THE HIGH SCHOOLS, TULSA, OKLAHOMA. M. E. Binkley under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

This study covers the development of the courses in home economics for boys in the high schools of Tulsa, Oklahoma.

DEVELOPMENT OF THE VOCATIONAL HOMEMAKING PROGRAM IN ARKANSAS, FROM 1917 TO 1939. K. Williams under direction of M. Williamson, Colo. State Coll. (Master's Thesis 1941). COMPLETED

The development of the vocational homemaking program in Arkansas from 1917 to 1939 was traced.

HOME ECONOMICS EDUCATION

History and status (Continued)

STATUS OF HOME ECONOMICS TEACHERS IN REPRESENTATIVE HIGH SCHOOLS OF OHIO. I. E. Stanford under direction of G. G. Hood, Univ. Colo. (Master's Thesis 1941). Abstracted in Univ. Colo. Studies 26, No. 4, p. 138. On file Univ. Colo. Library. COMPLETED

Data were compiled into tabular form showing: 1) academic preparation and professional training; 2) total years teaching experience; 3) certification; 4) teaching program; and 5) remuneration. Findings showed that the average home economics teacher in Ohio during the school year of 1939-40 held a Bachelor's degree; was well-prepared in academic and professional training; had taught seventeen years; held a life certificate; taught five to six classes daily with a pupil load of one hundred students; and received two thousand forty eight dollars annual salary.

A COMPATIVE STUDY OF EMPLOYED AND UNEMPLOYED HOME ECONOMISTS. C. M. McLeod under direction of E. S. Eppright, Tex. State Coll. for Women (Master's Thesis). IN PROGRESS

A comparative study is being made of employed and unemployed Home Economics trained homemakers. The two groups are comparable as to home economics training and time of training. All are graduates of the same institution. Members of employed group are all teachers. Points included in the study are size of family, reasons for working, management of money, leisure time with family, cultural opportunities of the family and social activities. It is hoped that the study will provide some information for evaluating the true gains or losses from employment as well as some of the problems confronting the employed homemaker.

THE USES WHICH A SELECTED GROUP OF HIGH SCHOOL GRADUATES FROM 1919-1937 HAVE MADE OF HOME ECONOMICS INSTRUCTION SECURED IN MANSFIELD, ARKANSAS. O. L. Stringfield under direction of D. C. Kent, Univ. Tenn. (Master's Thesis 1941) COMPLETED

The study was based on questionnaires returned by 117 girls who had graduated between years 1919 and 1937. Fifty-eight percent of the graduates were married and approximately 75 percent lived in Arkansas. Questions asked dealt with direct use of Home Economics training, standards of living, social life, and general culture. Graduates reported that their Home Economics training was aiding them in their present positions. The data showed that more attention should be given in this school to preparation for (1) provision of food for the family (Gardening and canning), (2) selection of clothing, (3) care and guidance of children, and (4) consumer buying.

HOME ECONOMICS EDUCATION

History and status (Continued)

THE AMOUNT AND PHASES OF HOME ECONOMICS TAKEN BY THE GIRL GRADUATES OF THE RURAL HIGH SCHOOLS OF ATHENS COUNTY AND THEIR VOCATIONS AFTER GRADUATION, 1933-1937. M. B. Judy under direction of I. M. Patterson, Ohio Univ. (Master's Thesis 1941). On file, Library, Ohio Univ.
COMPLETED

The purpose of this study was to determine the amount and phases of home economics taken by the girl graduates of the Athens County rural high schools and the vocations they entered after graduation. Records were secured for 326 girls from a total number of 578 who were graduated during the five-year period investigated. Comparisons were made between two groups of girls; namely, those who had studied, and those who had not studied home economics in high school. It was found that 49.5 percent of all graduates were engaged in home making. Other vocations followed were teaching, clerking, nursing, salesmanship, newspaper work, tea room hostesses, and clerical. Thirty-eight percent of all graduates married within a five-year period. The trend of marriage was greater for the home economics group.

A STUDY OF THE OCCUPATIONS AFTER GRADUATION OF VOCATIONAL EDUCATION MAJORS IN THE DIVISION OF HOME ECONOMICS OF TEXAS TECHNOLOGICAL COLLEGES FOR THE EIGHT-YEAR PERIOD OF 1928-1935. I. H. Wolfe. V. Johnson, Tex, Technol. Coll., adviser (Departmental). Probable date of completion 1942.
IN PROGRESS

Purposes of this study are to determine what vocations majors of vocational education in home economics enter after college graduation and how long they remain in different positions for gainful employment. Data for vocational graduates of this period are being collected, tabulated, treated arithmetically and analyzed. Findings to date show that 95 percent of vocational graduates are gainfully employed. Of these, 91.7 percent teach homemaking for an average of 4.7 years. Seventy-eight percent marry. About one-third work in home economics professions other than teaching for an average of 3.1 years; one-eighth do work not related to home economics; one-tenth have received masters degrees.

HOME ECONOMICS EDUCATION

Administration

A STUDY OF TEACHER LOAD IN THE VOCATIONAL HOME ECONOMICS PROGRAMS OF THE STATE OF WASHINGTON. A. M. Stevenson, State Coll. of Wash. (Professional). On file State Coll. of Wash. Reported in Notes on Research No. 6, p. 247, 1941. COMPLETED

Supervisory visits indicated the need of a factual basis to help with needed adjustments regarding teacher load. Information was especially needed regarding the time required for home visits. Data were obtained from time records of visits and two check sheets. Fifty-four teachers kept time records. They taught an average of 55 girls and carried an average of 62 projects. During the semester they averaged 40 home visits in 36 hours and 17 minutes. Of the total time, 31 percent was spent in travel and 69 percent in the homes. The summer average for all 54 teachers was 10 visits, but only 43 percent were employed. Individual loads varied widely. There was little relation between size of schools and the teaching load. The attitude of the teachers was good.

A STUDY OF RECORDS AND FORMS USED IN SUPERVISION AND REPORTS OF INDIVIDUAL'S HOME EXPERIENCES. T. Tincher under direction of F. Corbin, Univ. Nebr., (Master's Thesis 1941). COMPLETED

The purpose of this study was to determine satisfactory forms to be used in Vocational Departments to carry out the best possible home experience programs. Forms in use by various states and departments were submitted and an evaluation made from those received. It was discovered that many vocational schools felt no need for questionnaires or aid for conferencing with the pupils. Half of those who did use questionnaires had some for both the teacher and the pupil. Certain forms were selected as being most desirable and others were devised to aid in the conference with the student and in selecting and reporting the projects.

A STUDY OF THE TENURE OF NEBRASKA VOCATIONAL HOMEMAKING TEACHERS OVER A TEN YEAR PERIOD. M. Lofink under direction of F. Corbin, Univ. Nebr. (Master's Thesis 1941). COMPLETED

The purpose was to determine the teaching tenure of homemaking teachers in Nebraska. Questionnaires were sent to the 1928, 1929 and 1930 Vocational Homemaking Graduates of the University of Nebraska. Among the findings it was discovered that the average number of years taught was four and that only five percent were teaching at the end of the ten-year period. One-third of the group left their first position to be married; one-tenth of them left to enter other fields of work. About one-fourth went to positions which seemed an advancement. The study recommended that an effort be made to break down the prejudice against married teachers and that a salary schedule be developed.

HOME ECONOMICS EDUCATION

Administration (Continued)

THE PREDICTION OF SCHOLASTIC SUCCESS OF COLLEGE STUDENTS IN HOME ECONOMICS. R. T. Lehman, Ohio State Univ. (Professional). (Part of larger project, Guidance-Research Program). On file School of Home Economics, Ohio State Univ. COMPLETED

The purposes of this project were: 1) to find a means of early identification of those entering home economics freshmen of the Ohio State University who will probably need special academic guidance; and 2) to discover the point-hour ratio level which could be used satisfactorily as one of the bases on which sophomores and transfers might be selected for the four-year curricula. The study involved the adaptation and testing of a prediction index with freshmen, an analysis of the records of students who were out-under-rules or on probation, and a study of the scholastic records of seniors. The findings are significant for the guidance program of the School of Home Economics.

VALIDITY OF SELECTION OF PROSPECTIVE HOME ECONOMICS TEACHERS AT PURDUE UNIVERSITY. R. Davis under direction of M. G. McFarland and A. Long, Purdue Univ. (Master's Thesis 1941) On file Library, Purdue Univ. COMPLETED

The purpose of the study was to determine the usefulness of the data now available to a committee engaged in the guidance and selection of prospective home economics teachers at Purdue University. The group studied was limited to eighty-one home economics teachers who had graduated from Purdue University and had taught in vocational departments in Indiana two or more years between 1934 and 1941. The data collected included their academic records and ratings by supervisors of student teachers, itinerant teacher trainers, and school administrators. Correlations were calculated for all scores and ratings collected. The findings indicated that achievement in particular courses in method and student teaching seemed to bear important relationships to success in teaching, and that the best measures of success were attainable at the close of the student teaching period.

CERTAIN FACTORS AFFECTING EXPENDITURES FOR TRAVEL OF VOCATIONAL HOME ECONOMICS TEACHERS IN WEST VIRGINIA, 1939-40. P. Stout under direction of H. Chadderdon, Iowa State College. (Master's Thesis 1942) IN PROGRESS

The purpose of this study is to discover needed changes in policies relating to the travel expenditures of vocational home economics teachers in West Virginia and to provide a basis for teachers' and administrators' investigating in what ways and how well travel expenditures have been used by home economics teachers. Data were obtained from the expense accounts sent to the Office of the State Supervisor of Home Economics Education. Recommendations are being made for changes in policies relating to travel expenditures in future plans for vocational homemaking education in this state.



University of
Connecticut
Libraries
